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PROCEEDINGS OF CONFERENCE ON URBAN PLANNING FOR ENVIRONMENTAL HEALTH HELD AT HARRISBURG, PENNSYLVANIA, ON MARCH 13-14, 1963

ROBART A. TAFT SANITARY ENGINEERING CENTER
CINCINNATI, OHIO

PREPARED FOR
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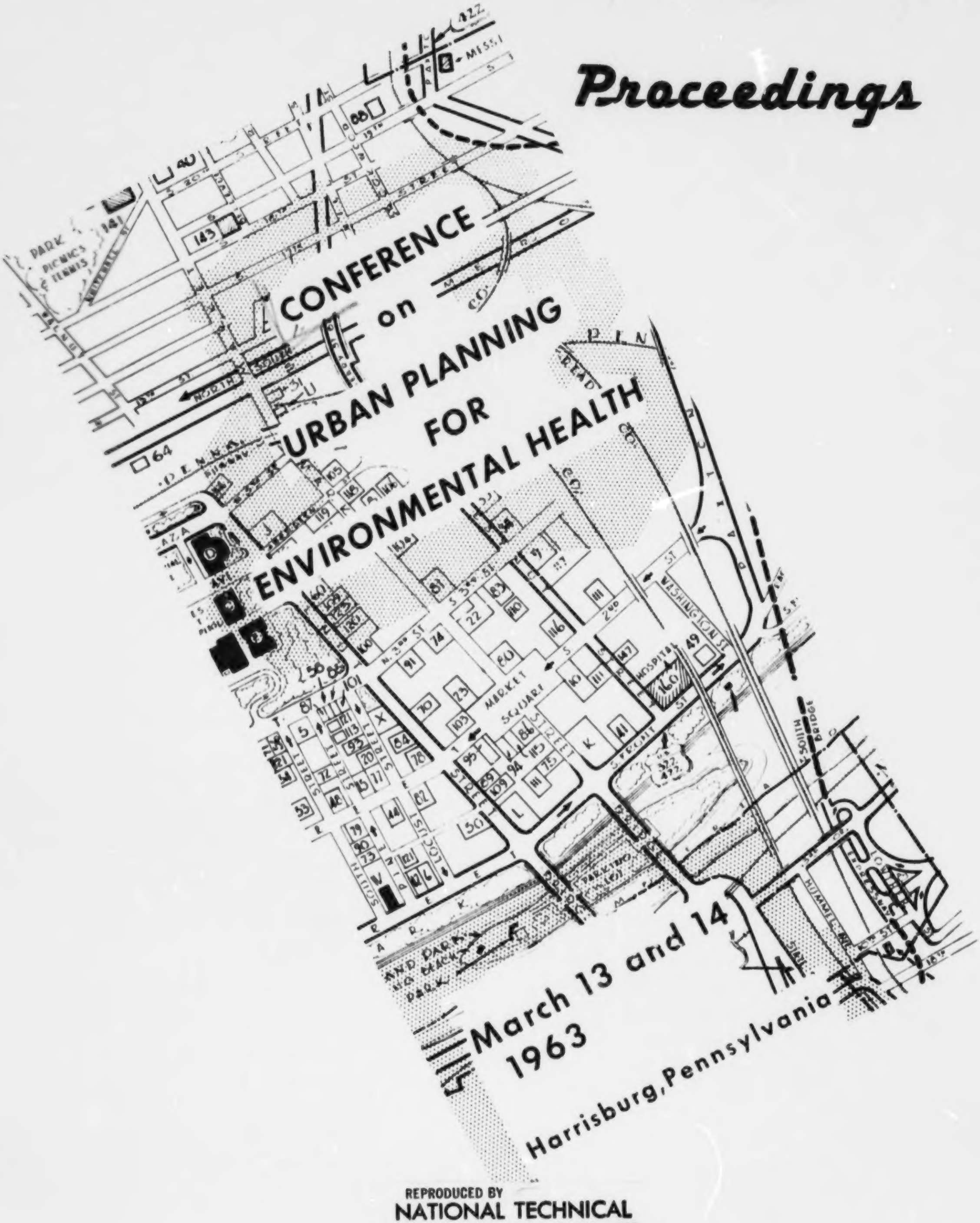
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CONFERENCE on URBAN PLANNING FOR ENVIRONMENTAL HEALTH

March 13 and 14
1963

Harrisburg, Pennsylvania

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These proceedings indicate the variety and scope of problems existing in each aspect of environmental health. Topics covered at the conference include: legislative and jurisdictional aspects of urban planning; progressive public health; water system planning; sewage problems; solid waste problems; control of atmospheric contaminants; housing; planning processes; health department roles; local agency roles; elected offcial roles; civic group roles; and comprehensive planning by county-level administrators and citizens.

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Proceedings

Conference on Urban Planning for Environmental Health

March 13-14, 1963
Harrisburg, Pennsylvania

This conference was designed for all health and planning personnel, public officials, and lay citizens who are interested in the planning of a more healthful environment. The proceedings have been assembled for the conferees and should not be cited as a bibliographic reference.

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Pennsylvania Departments of
Health
Commerce
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in cooperation with

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TRAINING PROGRAM
Robert A. Taft Sanitary Engineering Center

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE U.S.A.

Public Health Service
Bureau of State Services
Division of Environmental Engineering and Food Protection

July, 1963

PREFACE

Health in communities depends to a large extent, on adequate facilities and services for environmental health. The rapid growth of metropolitan areas is compelling citizen and official recognition of the need for correcting present deficiencies and for planning now to prevent occurrence of future problems. Such plans must be judged in the light of overall community needs and desires.

The proceedings which follow indicate the variety and scope of problems existing in each of the several aspects of environmental health. They can be solved most effectively through realistic concern and constant effort for improvement by all of us. This effort requires the cooperation and teamwork of all persons of a community, including health, planning, and public works officials and citizens.

The Public Health Service believes that the challenges of maintaining a healthful environment in our urbanized and industrialized society can be met by intelligent analysis, foresighted planning and positive action.

It is hoped that those who attended this conference on Urban Planning for Environmental Health and you who read these proceedings will have a greater awareness of the problems and possible solutions. This greater awareness will surely increase the efforts and cooperation to secure a more healthful environment now and in the future.

The Public Health Service and our co-sponsors are pleased to have the opportunity of jointly assisting in this important work.

Wesley E. Gilbertson, Chief
Division of Environmental
Engineering and Food
Protection

ATTENDANCE

Attendance at the conference represented many groups, the total being 159 conferees. The engineering, health, and planning professions were about equally represented from the following:

Federal Government Agencies	6
State Government Agencies	67
Local Government Agencies	45
College Faculty and Students	21
Private Industry	20

COOPERATING AGENCIES, TO WHICH CONFERENCE SUCCESS IS INDEBTED:

Pennsylvania State Association of County Commissioners
Pennsylvania State Association of Township Supervisors
Pennsylvania Society of Professional Sanitarians
Pennsylvania Society of Professional Engineers
Pennsylvania Municipal Authorities Association
Pennsylvania State Association of Boroughs
Pennsylvania Home Builders Association
Pennsylvania State Chamber of Commerce
The Pennsylvania State University
Pennsylvania Economy League, Inc.
Pennsylvania League of Cities
Pennsylvania Health Council
University of Pennsylvania
University of Pittsburgh
Wilkes College

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The Honorable Joseph W. Barr, Jr., Mayor of Oil City, Pennsylvania, was unable to participate as scheduled due to family illness.

WELCOME - C.L. Wilbar, Jr., M.D.

It is a pleasure for me to welcome you to this conference on Urban Planning for Environmental Health and to greet the participants in this morning's session - Secretary of Internal Affairs Blatt, Secretary of Commerce Tabor and Mr. Wesley Gibertson of the United States Public Health Service.

This morning's session is devoted to discussing the legal and jurisdictional aspects of urban planning, with major emphasis on the fact that much can be accomplished when municipal officials recognize their joint responsibilities in attempting to solve mutual problems. The second major point to be discussed is how progressive public health programs fit into the theme of proper planning.

This afternoon's session will be concerned with typical environmental health problems confronting the various municipal officials in the Commonwealth, including discussions on air, water, refuse and housing.

Tomorrow morning's session will deal with how various groups or agencies can give aid to a municipality in either preparing or carrying out plans for the expansion or betterment of environmental health services in highly populated areas. It is recognized that the groups or agencies selected are not the only ones which can help the various communities, but due to time limitations, the ones felt to be representative have been selected.

The Thursday afternoon session will focus attention on the problems of comprehensive planning, with emphasis on how environmental health planning needs to be integrated into the total planning picture.

I would now like to digress a moment to give some background history of the Health Department's role in this area. An extensive survey of the Department of Health and its services was conducted in 1948. This survey report is titled "Keystones of Public Health for Pennsylvania." Some of the major recommendations made at that time involved up-grading of the professional staff and the decentralization of this staff to the local level. These two major recommendations were accomplished. In fact, most of the major recommendations, or portions thereof, made in this survey were accomplished. Tomorrow morning you will hear of the services available to the municipalities from our decentralized offices.

In 1960 we recognized that a new and up-dated baseline must be drawn if we were to continue to increase in efficiency. Therefore, in 1960 a second comprehensive survey was started. Two of the recommendations from this survey were to increase the local representation in the State's programs and to accelerate the Department's activities in planning for local facilities.

To many people, public health means only the control and regulation of the numerous aspects of living; to some it means free clinics, immunization and hospital services; to others it means the protection of individual health from the masses of people. But I think the definition included in the charter of the World Health Organization most clearly defines health. This definition proclaims, "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." In the environmental health field this reverses the traditional legal approach of requiring evidence that physical conditions are such that it is reasonable to assume they will lead to disease. Today we are thinking in terms of whether the physical conditions are sufficiently good to promote physical, mental and social well-being. This change of emphasis is not the only problem. We also have the situation of more people.

We are all aware that the population of the United States is expanding and increasing in its mobility. At the turn of the century the statistics indicate that 60% of our population lived in a rural environment. At that time the major environmental health problems revolved about private water supplies, private sewage disposal, private refuse disposal and the control of communicable diseases. By 1960 almost two-thirds of the population lived within the 212 standard metropolitan statistical areas. These statistical areas are defined by the Census Statistical Bureau as a county or group of contiguous counties which contained at least one city of 50,000 inhabitants or more or twin cities of at least 50,000. This is causing the public health administrators to raise a considerable number of questions as to their role in carrying out health protection programs for the public. One question is: Does metropolitanization affect health and if so what individuals or groups are influenced or affected? This is only one of the questions raised at a national symposium held last year. To find the answers to some of these questions the federal government is sponsoring research. A few of the research projects being sponsored are:

a. Research into the public health aspects of housing, including construction and maintenance of all types of dwelling places.

b. Additional research into the problems of solid waste collection, transportation, storage, and disposal.

c. The effects of environmental stress factors on man, such as: light, noise, color, vibration, temperature, radiant heat, air pressure, and humidity.

d. Metropolitan planning for environmental health.

e. Studies aimed at formulating criteria for the design of neighborhoods, for the use of planners, developers and contractors so as to provide a healthful residentail environment, including, but not limited to, site selection, utilities and services, land use, and urban facilities.

A committee of the American Public Health Association stated: "The fundamental environmental engineering problems associated with community growth are not related solely to the technical aspects of water supply, sewage disposal, refuse disposal, housing, radiation, and air pollution control but to governmental factors including legislation, lack of adequate planning and little or no health department participation in planning, ineffective financial arrangements rather than inability to obtain capital, and inadequate community understanding."

As the answers are brought forth from this research the health of the people of this Commonwealth will be better protected and a higher level of physical well-being will be obtained.

Many of us find ourselves so deeply involved with yesterday's mistakes and today's problems that proper planning goes by the wayside. As one planning consultant very aptly stated "like many planning administrators, local public health officers find themselves so busy handling health emergencies that they seldom have time to develop and carry out long-range plans aimed at preventing future health problems." We are expecting to spend more time in helping to plan for future improvements.

We hope that by following the recommendations as set forth in the 1960 health survey that this Department, sister State departments and the local municipal officials will be better able to plan to prevent environmental health problems within the communities. I hope that the information obtained and the associations made by attendance at this Conference will cause a closer relationship of the planners, municipal officials and State officials.

WELCOME - John K. Tabor

Thank you, Dr. Wilbar; Madam Secretary Blatt, Mr. Gilbertson. I would like to recognize Dr. Pitkin, and ladies and gentlemen who have gathered for this conference. My function this morning is to extend a welcome to you on behalf of the Department of Commerce as you meet here in Harrisburg, our common wealth capitol.

Perhaps as you heard my credentials generously mentioned by Dr. Wilbar, you could divine that I cannot claim to be an expert in planning or in the area of the social sciences which involves planning and environmental health. The facts are that I am a trial lawyer by profession; a sometime politician by avocation; and now, by choice and with a will, a public servant. However, in my legal work, I have often come into contact with people who have become bitter or frustrated in their daily lives and are thus propelled into acting and reacting in ways that bring them to the law courts. Likewise, in seeking the support of the voters and in educating myself on their problems, as any conscientious vote-seeker (and we have one of the best right here, I might add, even though she's on the other side of the aisle) must do, we have sensed, and I am sure I speak for her as well, certain resentments about society and also certain gratifications or support for the movements of our society and of our laws and of our state and local governments in certain directions which deal with environment. Finally, in the brief but busy weeks since I was confirmed by the Senate as the Secretary of Commerce, I have become aware of many problems confronting our commonwealth and, of course, the many assets that we have. More particularly, inasmuch as on the Department of Commerce's shoulders, to a large extent, rests the thrust of the commonwealth towards renewed industrial development and renewed industrial vigor, I have learned that essential to a healthy, economic society in a healthy (in the classic sense of the term), human population and healthy, attractive, well-planned, well-governed communities. Where we lack these, industry will not locate and men will not be employed. Where we have these, industry will rush in and employ and attract and expand to the well-being of us all -- well-being for the man who works and holds his head high because he's done an honest day's work; well-being for the community which receives taxes with which it can provide effective, efficient services; and well-being for the nation because we are economically strong, as well as physically healthy.

Thus, perhaps, out of this set of credentials (and I will confess that I am modest in standing before you who are the professionals) I can perhaps venture a thought as to what it is that I have the opportunity of welcoming you to today. I have looked over the program and I have listened to Dr. Wilbar describe the program and I see that you will first talk about environmental health problems. These are, I suppose, the basic facilities, the physical facilities and physical surroundings within the community -- water, sewage, refuse, air and housing. Then you move on and you attack the problem with the various instruments now at your command. I would challenge you to be creative and not to be content merely with what exists. If there is some flight of fancy, some inspiration in the interchange of ideas, that occurs in meetings like this, don't be bashful. Express your views. Try them out in debate. This is what democracy is all about. Therefore, if, in addition to the attacking instruments that are already on the panel, others occur -- get them into the discussion also!

You are now scheduled to discuss the planning process, health departments, local agencies, state agencies, the work of elected officials and the role of civic groups. Maybe there are other weapons that exist, or should exist, to attack the problem of the physical that you will talk about. Tomorrow afternoon you will talk about comprehensive planning and I believe it is here that our Department - the Department of Commerce - which, as you know, has within it the Bureau of Community Development, plays its role. As I have talked with my very competent staff, they have helped me to see that the Department viewpoint is that, in addition to dealing with the tangible physical and underlying basic necessities of water, sewage, refuse, air and housing, there may be another area that is a vital, if not more vital, in producing this healthy environment and that is a well-conceived, well-planned community with proper traffic flow, green space, open space, arrangement of buildings, interrelation between public housing, private housing, shopping areas and all of the rest. The question that will be before you is the interrelation of these various physical facilities and basic necessities and the comprehensive overall planning, and the determination of their impact on the creation of the healthy environment.

I would like to digress for a moment. I referred to my competent staff. I don't think I am being overly provincial when I say that Pennsylvania is extremely fortunate in its staff of Community Development personnel. Mr. Dan Rogers, you may know, is the Director of that Bureau. He has with him (and they will be participating with you in certain portions of this program): Mr. Otto Amann, Mr. Bill Good and Mr. Louis Lex. Mr. Rogers has as well a host of men working in the field with you in your home communities. I just feel that we are fortunate to have these capable people. I feel fortunate that they can help me in talking to you with some degree of intelligence about urban planning for environmental health. Incidently, on this subject, when Mr. Rogers finally defined it, I suppose his Department of Commerce orientation showed through because he transferred the terms and ultimately described the problem as a healthy environment. But whether it's "environmental health" or a "healthy environment", I think this is the direction in which we all try to move in this meeting. I am, therefore, going to suggest to you, in the light of the program you have and to assist me in learning and perhaps to assist yourselves in learning, that you consider in your deliberations the three questions which I see emerging from this program.

The first is: Does providing the essential physical facilities -- and we mean there the water, and the sewage, and the refuse, and the rest -- does providing these facilities assure a society where individuals can reach their fullest potential? As you can see, I am defining the term "health" in a very broad sense. Perhaps Dr. Wilbar was hinting at that. It's reaching the fullest potential for the individual. The first section here seems to me to pose the question -- and I think you must examine the premise -- does providing essential physical facilities assure a society where individuals can reach their fullest potential, or, if it doesn't assure it, to what extent does it contribute to it?

The second question, which relates to the later part of the program: Does comprehensive planning, in all that it means, assure or contribute to the full realization of the potentials of the individual?

And then, somewhere undergirding all of this meeting and both of their questions, another premise which I would like you to examine is: Does the changing of physical environment really affect the ability of an individual to realize fully his potential? I'm throwing these questions out to you. Maybe to you who are in the planning field, the answers are "old hat", but I'm new and I would like to have an answer to those questions.

I feel that you men are some of the most competent professionals in the field or that you are laymen who have given enormous amounts of time to dealing with these problems and I would like you to come to conclusions on these questions. I would appreciate it if some reporter or secretary whom you have, at the conclusion of this meeting, would give me the sense of your meeting as to the answers to these questions for my education and for the direction of the Department of Commerce as we begin the work of the next four years. I look forward to receiving your conclusions and, by the way - "WELCOME!"

LEGISLATIVE AND JURISDICTIONAL ASPECTS OF URBAN PLANNING - Genevieve Blatt

I think it's tremendous that so many of you have come from such distant points to join us at the State Capitol in a discussion of a problem that is of as much concern to us as it is to you. And I know that's saying a great deal!

As I came up here, I noticed a pamphlet on the platform, that I suppose you've seen and that the Department of Health has put out, "Municipal Air Pollution Control in Pennsylvania." It brought back some very old memories to me as I opened it up to the second page here and noticed the smoke density charts. Years and years ago I was asked by the then Mayor of Pittsburgh, Cornelius D. Scully, if I would serve temporarily as secretary and chief examiner of the Pittsburgh Civil Service Commission. I was practicing law and was quite insistent I didn't want any government post, but, because he was an old friend of mine and had helped me greatly with his advice while I was in law school, I agreed that I would go in temporarily. That temporary appointment, I might say, lasted four years. But one of my first duties was to set up an examination for smoke control inspectors. That was one of the many things I knew nothing about when I took the position, and so I asked the Secretary of Health in the city government at that time if he would give me some guidance as to where I could find the experts who could set up a proper examination for this civil service category. I'll never forget to this day, that the expert brought a set of charts like this and said, "I'll assist you in preparing a written examination, Miss Blatt, but the main thing these men will have to do is come out with me and let me see if they know how to use these charts." Well, believe me, I thought I had stepped straight into a place where the next thing would be a man with a white coat! If that chart was going to demonstrate anything about anybody's intelligence, it was beyond me to comprehend it. However, he finally showed me how this business worked.

A year or so after that, the war was on and the same Mayor persuaded me that I owed him another favor. And that was to help out temporarily in the City Law Department, where many of the City Solicitor's assistants had gone off to the military service. So I agreed to go down there and serve as Assistant City Solicitor temporarily. That lasted three more years, and one of my first jobs there, and I've always been proud of this, was to write the first modern Pittsburgh Smoke Control bill or ordinance. It was the one that people said would never be enforced. I wrote it just as the war was beginning, and, at my suggestion, we put in a clause that it would not be enforced until the end of hostilities and a reasonable time thereafter. As reasonable people, we knew that you could hardly go to industries that were being pressured by the federal government to turn out munitions as fast as they could and say, "Now be careful how much smoke you put in the air." But I do know there were many skeptics at that time who said, "That's all right to pass this ordinance, but Pittsburgh will never have smoke control." Pittsburgh couldn't afford smoke control, they said. "If you don't see that black stuff, as black as this blackest black on the chart, coming out of the steel mills, you'll never have jobs in Pittsburgh," they claimed, "Forget about it!" But the Mayor in office when the war ended, our former Governor David L. Lawrence, was convinced that smoke control was really possible and that we could have it. And, with the help of our state officials, and of our major industries - the steel industries, the railroad industry - we did get smoke control in Pittsburgh.

I have often thought of one lesson that I learned by observation of those who were then carrying out that ordinance that I had written. It was that, great as Pittsburgh progress was and has been -- and as a Pittsburgher I am awfully proud and really almost jumped out of my skin when I heard a so-called comedian on T. V. the night before last say that he came out to Pittsburgh with the hopes of getting some "dirty" jokes about a dirty city and he found it was beautiful and clean now, and he couldn't talk about those things any more -- our problem is far from solved, or at least has been in the recent past, far from solved. This is simply because, big as the city of Pittsburgh is, vigilant as its city officials are, it couldn't meet the problem of smoke drifting in over its boundaries from other places, from other industrial establishments in other parts of Allegheny County, and even beyond the county borders in the adjoining counties which make up part of the great metropolitan Pittsburgh complex.

So I'm here today as the present Secretary of Internal Affairs to tell you that our Department is greatly interested in this problem and is more than proud to cooperate with the other departments of your state government in arranging for this conference. I am going to try to make my remarks as brief and as clear and as honest as possible.

As I say, I'm proud that we have this opportunity to discuss the problems of environmental health with you and that I, particularly, have been asked to discuss what have been labelled the "Legislative and Jurisdictional Aspects of the Problem."

We're not the originator in the Department of Internal Affairs of the urban planning idea, by any means. And we're not the experts on health problems, by any means. But I do think that we can lay some claim, through our Bureau of Municipal Affairs, to being the prime movers in the effort to encourage local governments to try to solve the problems of environmental health and urban planning by themselves, without constantly running to some other source of solution, such as their state or national capitols.

And, in this effort, I think that the key word is "COOPERATION." Cooperation among the local governments effected. Cooperation among the citizens and their local governmental agencies. Cooperation among the business and industrial organizations and governmental agencies. But, as I said, especially cooperation among local governments. And that is why our Bureau of Municipal Affairs has done its utmost to promote this sort of cooperation, recognizing the limitations of our staff and our funds, and to give it the utmost possible promotion in Pennsylvania.

In 1957 we published a pamphlet which we entitled "Selected Areas of Inter-Governmental Cooperation." In that pamphlet, we tried to assemble under two paper covers, in a very cheap job of reproduction, all the appropriate statutory law in Pennsylvania, that either authorized or directed the cooperation of local governments for certain specific or for certain general purposes. Immediately upon its publication, we began, both I as Secretary of the Department and the then Director of Municipal Affairs and those who have served in that capacity since, to preach the theme of cooperation wherever we have had an opportunity to talk. I think the first opportunity I had, after the publication of this booklet, was a conference of local government officials called in the Allentown-Bethlehem-Easton area. If any of you come from there, you know the tremendous population complex we have with those three big cities and many smaller boroughs and townships making a totally populated area where almost no one, except the professionals, can tell where one community leaves off and another begins.

In 1962, recognizing that years had intervened and new laws had been passed and amendments to the old laws had been adopted, we revised that old booklet and put it out in somewhat more attractive form, still with the same title "Selected Areas of Inter-Governmental Cooperation." Again, it gives in alphabetical order all the appropriate statutory permissions or directions of our General Assembly to local governments, covering the areas in which they may get together to do jointly the things which obviously they couldn't efficiently or cheaply do singly. I felt that our staff chose a very appropriate cover illustration. From this distance, probably it makes no sense to you at all, but this cover is an aerial photo of the area which you and I know as Levittown, Pennsylvania. But there is no legal entity known as Levittown, Pennsylvania. It consists of parts of five different local governments. These white lines imposed on the aerial map show where these local government boundaries run, and you can see that everyone of them extends into or includes part of the built-up area that we call Levittown. The people down there really know the necessity for inter-governmental cooperation. And the people in the Allentown-Bethlehem-Easton area, and the people in greater Pittsburgh and greater Philadelphia and greater Erie and greater Johnstown and "greater everywhere else" are learning it day by day, even if they haven't had to meet it so suddenly as the people in the Levittown area have.

Besides the publication of these two items, we have worked very closely with different legislators, in regard to legislation they have proposed and in regard to suggestions we have had, in the field of making inter-governmental cooperation easier and more attractive. We were very interested in Senator Stevenson's suggestions as to joint-service-districts. We've worked with several other members of the General Assembly regarding specific ideas of theirs. We've also kept, and are trying desperately to keep up, a file showing all the communities in Pennsylvania which have entered into intergovernmental agreements in the environmental health field or in any other field of municipal activity. We have records in our office of hundreds of such agreements with hundreds of local-government participants, and, insofar as our time and staff permit, we are trying to keep track of what happens to them.

I would say the only significant thing that has been developed so far, is that we don't know of one such agreement having been abrogated, although any one could be at any time. The signatories could pull out whenever they choose, but I don't know of one which has been abrogated. On the contrary, we could name dozens which have been in existence for many, many years and have proved very successful.

We've also tried to keep track, in our Bureau, of out-of-state developments in this field, and, in our monthly magazine called "Internal Affairs," we have, from time to time, had notes or feature articles regarding the activities of other states, other municipalities, even of areas in other countries, such as the Greater Toronto experiment in Canada, where there has been extensive inter-governmental cooperation at the local level. I don't have copies of our magazine with me, but if any of you would be interested in receiving our monthly magazine and being kept up-to-date on these developments, we would be very glad to send it to you. All you need to do would be to furnish us with your name and address.

Finally, we have prepared a moving picture film, feeling that visual education is maybe the most effective means of persuasion, and that film is available if you would care to show it at any meeting of yours locally. We've a limited number of copies available. They're in constant use. We may not be able to give you the first date that you request. But, if you give us an alternate date or two, I'm sure we will be able to meet your schedule and will send that film out. It's called "GIVE AND GO," and you old basketball players will recognize the origin of that term. We think it's a very appropriate term in regard to cooperation. If all of the local governments concerned in the solution of a problem will "give" a little, they will all "go" a long way. Some of you must belong to the Rotary, Lions, a service group or some municipal or civic group in your community. Maybe you'd like to show the film to your group. It runs 27 minutes, time, we hope, to fit into the ordinary program time of such an organization. It is also timed to fit into a 30-minute television segment. All you need is a screen and projector and someone who knows how to operate it, and we would be glad to supply the film.

It tells in a dramatic way, and in color - it's very beautiful, I think - the story of three communities: a second-class township, a first-class township, and a borough, each of which had a problem that was bothering its citizens and officials. Not one of them was able to solve its individual problem within its individual boundaries but, by a series of circumstances which are developed in the film, they found out that, by the three of them getting together, they solved all three problems very easily and to the satisfaction of each one concerned, and each one got out of it a great deal more, it seems, than it had put into the venture. I think that film shows, in a way that maybe no amount of speeches could show, how important intergovernmental cooperation is and how easy it is to do it, if you just have the will to get at it and start.

We preach inter-governmental cooperation in the Department of Internal Affairs, because we conscientiously do think it is the best of all the solutions that have been brought to our attention or that we can think up ourselves.

We think it's better than annexation, for instance, even if annexation were practical, which it isn't in most cases, because so many small communities are so unwilling to be annexed to the larger ones.

We think it's better than consolidation, which is also advocated in some areas, with several small communities getting together to make one large one which would have the resources to solve the problems of the entire area. We think, as with annexation, that such consolidation is very hard to bring about and maybe undesirable, likewise, to bring about. But, desirable or undesirable, we just don't think it's likely to happen.

We also think that inter-governmental cooperation at the local level is better than constantly running to Washington or Harrisburg to have some higher authorities step in and superimpose a solution for the problems of environmental health or any of the other inter-municipal problems that occur.

Frankly, we rather fear the results of these other methods, and we feel that cooperation permits joint action without the loss of individual identity. It permits collective activity without any danger to the financial stability of the participating local governments. We think it permits an overall solution which is the only feasible solution to problems which simply defy solution on an individual community level.

Now I could stand here, I think, the rest of the morning, maybe the rest of the day, citing examples of the sort of problems you meet in the environmental health field and which we meet in many another field of local goverment that simply don't yield themselves to solution at the level of the individual local government, where perhaps they are first discovered or where perhaps they are first the cause of concern to the officials or citizens. I'm going to say just briefly to you that the industrial fumes, the noxious, perhaps poisonous fumes, which may rise from a factory in one community may very well bring illness and worse wherever the wind blows. And the wind is no respecter of community lines. The pollution that's poured into a river by a poorly managed mining operation will bring bad water wherever that river flows. Rivers and streams, again like the air, are no respecters of community lines. Uncollected garbage, improperly dumped refuse, untreated sewage, in one community will mean health dangers whever a mosquito or bird can fly, wherever an animal or a child can carry a germ. Industrial fumes, bad water and leaves are simply no respecters of the lines which you and I, as government officials, draw on our maps to show where our authority extends. So there's no one local government that can handle this kind of problem alone, no matter how much it can spend, nor no matter how much it does spend, and no matter how big it is.

If the city of Pittsburgh, alone, had set up a sewage treatment plant, which it could have afforded to do, no doubt, it would have been a foolish and futile gesture, because the communities lying above Pittsburgh on the Allegheny or the Monogahela could have polluted the water and would have done so inevitably. Not one of those smaller communities probably could have afforded a sewage treatment plant adequate to meet its needs. The Allegheny County Sanitary Authority, however, with the jointure of the City of Pittsburgh and of scores of these surrounding communities is meeting, and, I think, will meet that need very well. This lesson that was learned -- and it was obvious there in Pittsburgh at the confluence of the Allegheny and Monongahela -- is just as applicable along the Susquehanna river, along the Delaware, everywhere. And I'm sure I don't need to belabor the point, because I'm sure you can see it.

The state has recognized the problems of air pollution. It began by giving the second-class city of Pittsburgh authority in this field, as I mentioned before, and with the authority we passed our first modern ordinance. The state went on to give that authority to other areas. The state then went beyond that and set up our own State Air Pollution Control Commission. I noticed in this morning's paper - the Philadelphia Inquirer - a column by Morton Mintz out of Washington saying that for the first time congressional sources are optimistic about chances of enacting strong legislation against air pollution on the federal scale. So the federal authorities will be in after the interstate polluters. I welcome this as I welcome the State action, but I emphasize that the problem will never be really solved and satisfactorily solved without good cooperation at the local level, because there are certainly limits to which the federal or state authorities can go and certainly limits to the extent to which they should go, it seems to me. However, if the local areas don't solve this problem locally, they can look for more and more, and worse and worse perhaps, regulations on the federal or state level.

We think that there are two reasons why there isn't more inter-governmental cooperation at the local level today in solving environmental health problems and others. One is probably lack of concern. That old devil, "apathy." That "let George do-it-ness" so common in so many areas. Sure, you've got an air pollution problem. Certainly your water isn't what it should be. But maybe if you don't do something about it, the problem will go away or maybe some adjoining community will tackle it and that'll be good enough to serve your purposes. That attitude, I'm afraid, is all too prevalent in too many communities. Not on the part of people like you - who, after all, are concerned enough to be here to talk about it. But on the part of the people you have to go to, perhaps, to get money for a necessary municipal project of this kind.

Apathy does concern us and that's why we are so glad to see this conference. We hope it will dramatize and publicize the problem and get more people, particularly more officials, concerned about it and willing to spend a little money, if such is necessary. That's why we put out films in the Department of Internal Affairs, hoping to persuade people in service organizations, or others, that will look at it, that intergovernmental cooperation is a good way and an easy way and, in the long run, really an inexpensive way to solve the problem. I might add, parenthetically, we're also showing that film in high schools and colleges in the hopes that, if we don't convince this generation, at least we'll have some hope for the next one. And the children are reacting very interestedly and very favorably.

But we think there's another reason besides apathy or indifference or lack of concern or lack of willingness to do something, and that's one where we do feel we can do something constructive. That's the lack of knowledge as to just how to do what any individual might admit needs to be done. In other words, there may be people in your community who would agree with you that inter-governmental cooperation would be a good thing, but they may say to you that it isn't legal or it is too tough to work out, and some of you might believe that. Believe it or not, I have run into some municipal solicitors, who, without adequately researching the law, have said to me: "Well, maybe, they can do these things in Toronto or Ohio, or someplace, but in Pennsylvania we don't have the authority to do it." And they have even, on occasion, brought in the law books and said to me: "Now you show me where it says in here that a borough is allowed to join in an agreement with a township for a library, for instance, or for a water problem." They want to see it in black and white and have it documented by cases that have upheld the authority of the municipality.

That was the reason we published this book in the first place. That's the reason we updated it last year and re-published it, in the second place. To prove to the doubters that there's plenty of legal authority and plenty of statutory authorization for any municipalities in Pennsylvania with a very few exceptions in a very few limited areas, to get together and to do jointly whatever they can legally do separately. And for your solicitor, who may be still doubting, send him down and we'll show him chapter and verse what he can do if he wants.

In this book, we have set the subjects up in alphabetical order, and, from the "A's" of Airport Construction to the "Z's" of Zoning, we give you chapter and verse. We discuss the General Cooperation Law. In my personal opinion as a lawyer, there's enough authority in that General Cooperation Law to give practically any municipality that wants it authority to enter into any kind of agreement for any kind of inter-governmental cooperation. I believe that the wording here is broad enough and secure enough and would be judicially sustained. But for those who like to see there authorization in more detail, we begin our detailed discussion with "Airports." We show, as to second-class counties, that the second-class county code allows cooperative airport agreements. We move down to third through eight-class counties to show that their respective county codes allows it. We go down through boroughs, to the third-class, first and second-class townships, doing the same. We then go on to "Armories," and cite the law, the section, the page that authorizes armory agreements. Then through "Bomb Shelters," "Comfort Stations," "County Municipal Building." I noticed -- I'm not sure whether or not this is one of the oldest authorizations, but I know that it is an Act of 1913 that we cite here as the authority that was used when the city of Pittsburgh and the County of Allegheny went together to build the City-County Building. And many other municipalities where the county seat and the major city are located in the same area have done similar things. Clear down, and I say, through "X-Y-Z" to "Zoning", the authorizations specifically for entering into agreements with your neighbors as to these areas is given, and I would like to suggest that you take this home and look through it. And then I'd like to suggest that, after having done that, if you are particularly interested in one field, you write to me, or to Fred Hershey in the Bureau of Municipal Affairs, and ask if we know of any communities which have entered into an agreement of this kind. If we do, we will tell you about it. Then you can talk to those people and get their experience. We're not trying to sell you a "pig in the poke." We want you to be inquiring about it, and to be doubtful if you want, but we do think that, if you get into it, you will agree with us in our concern for inter-governmental cooperation.

We feel that this problem is perhaps growing faster than all the efforts that we've made and that you're making. I'm really deeply concerned about it. It may be getting ahead of us, almost too far ahead of us, to resolve it before it gets beyond solution at our level.

The population trends are aggravating this problem every day. I don't need to belabor that point, because there isn't one of you who doesn't live somewhere in Pennsylvania, I'll bet, that hasn't seen exploding populations of a suburban type surrounding some core area. It may be around a big city, it may be around a small city, but you know what I'm talking about.

You know that the demands for federal and state assistance in this field are increasing daily. As a state official, I'll say to you frankly, if they demand something of my department, I'm going to try to give it. So will Secretary Tabor. So will Secretary Wilbar. That's what we're elected for, to try to meet the demands for service. That's what federal officials are elected and appointed for. But every time we give it, it's probably taking something away from you locally that you could do just as well locally, maybe even cheaper and more satisfactorily.

So we hope that you'll do more inter-governmental cooperation, before it gets too late for you to do it. We are, as I say, worried that sometime soon it might be too late for local action. And, in my opinion, - and I'm speaking only personally now, for I don't know if I reflect the opinion of any other State official -- if that time comes, that will be a calamity. Because I value and prize local government, as we know it now. I think it means a lot to people to have a responsible government close to them that they can see and understand and complain to easily and daily. And I think it would be a calamity if we lost that.

We don't claim, in the Department of Internal Affairs, that inter-governmental cooperation as the solution for environmental health problems is the only answer. We don't claim it's always a cheap answer. We would never claim that it was either a quick answer or an easy answer. But, after reviewing the other possibilities of answers, we do feel it's the best and most basic answer.

I hope, therefore, that you'll give it thorough consideration today and tomorrow and always, and that you'll take advantage of the offer that I know I could make for Secretary Tabor and Dr. Wilbar and certainly for the Department of Internal Affairs, that, if we can help you with it through these publications which are available to you today, through answering your letters that you want to address to us later, or through the magazine we'll be glad to send to you every month, we'll only be too happy.

PROGRESSIVE PUBLIC HEALTH - Wesley E. Gilbertson

First, let me say I appreciate very much being able to participate in this conference, a subject which is of prime importance. Second, in connection with the preceding speakers, I think we were presented an unusual combination of points of view as to the essential ingredients in this total "mix," out of which we hope to "bake a cake." I think it significant that here in this initial session, and perhaps it will be continued in the subsequent parts of the program, that the health, the commercial and industrial aspects, and the internal affairs, or the inter-governmental relations aspects, will be brought into focus, because I think all of these are essential parts of the total under consideration.

In thinking about the topic that I have been assigned this morning, "Progressive Public Health," this question of terminology gets into one's mind. You think over this term "progressive" and you get mixed up in this whole business of liberal vs. conservative. In mulling over the implications of progressive art in your mind's eye, you see dismembered bodies and eyes peering out in the middle of the head or something like that. You talk about progressive jazz, and, my lord! This is really something full of discords. You go from there to progressive education and there's some controversy here, too. Although some people think of it in terms of matching the student's ability with the teaching approach, some people say not enough attention is given to the basic fundamentals. Then there's such a thing as progressive medical care, where, hopefully, the needs of the patient are taken into consideration as he convalesces and he is taken out of the more acute hospital care situation and moves into a convalescent home. Then we talk about progressive public health and wonder what we are dealing with here.

I'm going to take a couple of points and talk about progressive public health in terms of concepts; one is the priorities that we are going to focus on. It's pretty simple really, priorities in terms of where the people are. This gets into the whole question of the shift from rural to urban residency. Secondly, I will talk about progressive public health in terms of prevention, which is basic to public health, but also is basic to the other main topic that we're here to discuss these two days, "planning," because planning is essentially a preventive technique. So we have here the combination of two areas: planning and public health. In this case, the environmental aspects of public health are focused in terms of their preventive aspects.

Some people have described environmental health historically in terms of four stages. Going back historically, as mentioned by Dr. Wilbar earlier, the old plagues, the old epidemics, the acute disease, disaster and death are a long way back. In more recent times the emphasis has been on some of the more chronic problems, some of the minor communicable diseases, chronic diseases and the environmental relationships to them. Then we move up to the third stage, the creation of a safe and comfortable environment, one in which man can operate efficiently. Finally, the fourth stage, which we are looking forward to, is the creation of an environment which contributes positively to man's overall physical and mental health. I think this latter one was perhaps what Secretary Tabor referred to in his question, "How does this physical environment contribute to man's over-all potential?" I think it's this fourth stage we're shooting for here, where the environment will make a positive contribution to man's overall physical and mental health. If we had all four under our belts now, we would truly be in a position to say that we have accomplished "progressive public health." But we're still working towards that goal. We've still got problems ahead. We're now somewhere in the middle stages. But what are the possibilities of achieving that fourth stage? What can we do about it? Why is it necessary for us to come together in a conference such as this? There may be a little bit of eyebrow lifting, for example, when one tries to pin down what the urban health problem is, because after all, the big city has more physicians, more hospitals, a greater variety of medical assistance, specialists, perhaps a larger health agency, perhaps more treated water - all of these things. This is true but that's not the whole story, because after all, there is coming into the picture some subtle and some not so subtle relationships between man and his environment. These relationships are becoming more strained, more aggravated and at a rapidly increasing pace.

Now to step back for a moment and take a look at a backdrop of what we're going to talk about. A sizeable population growth has already taken place in our country, and when one looks ahead, he sees continued growth, perhaps something like a 45% additional population increase in the next twenty years. This population is concentrated, mostly in the urban scene. We add to this a continually growing industrial economy. We see every sign that this will continue, and we need it. We see the proliferation, the diversification of technology which contributes to this industrial growth. We see more engineers and scientists contributing to this development today than there were in all of man's previous history. In fact, I guess some 90% of all the engineers and scientists that ever lived are still living. We see the growth and use of energy tremendous amounts of energy of all types: electrical, coal, petroleum, nuclear.

We see automation coming in and, on top of this, a tremendous national effort, not federal but national in terms of all types of governments, of industry, and business putting money into research and development, which again brings forth new ideas, new growth and tends to accelerate, and perhaps aggravate, the conditions resulting from urbanization and industrialization.

Someone has called this whole scheme of things the "collapse of time" and has illustrated it by a simple example in the area of speed. We take the history of man's travel. We'll see that perhaps it took 3, 000 to 3500 years to move forward through the stages of man's walking, running, and getting on a horse, (even though some people go to Bowie and think the horses run pretty fast, still this isn't anything when we're talking about speed.') Then we come up in the past century through the steam engine and the automotive vehicle. Even at the dawn of this century, we were still just barely breaking the hundred mile an hour mark. In the last 60 years we have moved rapidly, first through the 500 or 600 mile an hour range in WW II in aircraft. We finally broke the sound barrier. Then speed really went up and within the last few years we have moved from the six to seven hundred mile range, up to 18, 000; 20, 000, even 25, 000 miles per hour range.

Against this background we see a continuous future development with an impact on man, both physically and socially. When we reflect on this, we have a fear that progress is not without its problems, that our way of life is not an unmixed blessing. For example, some of the folks here will remember some 10 or 12 years ago, a few of the health professionals expressed a growing concern about the pesticide problem. There was knowledge of the tremendous upsurge in the use of pesticides, not only by the householders, but in enormous quantities in agriculture, in commercial development, in all types of pesticide control operations, the potentialities of a slow, insidious type of poisoning. Then, all of a sudden, a great deal of concern arose on the part of the public within the last year, Rachel Carson came out with her book, "The Silent Spring, " which publicly dramatized this issue. We can say that this is a one-sided picture, and it is. We can say that it's an emotional approach, and it is. But we can also say that it tangibly gives substance to what is a public issue.

Into this whole framework comes the other question that I think everyone tries to resolve in his own mind. That is, the equation of the benefit versus the risk in any particular situation. Now the point in this particular conference is not so much that there are benefits. We know there are benefits. We need urbanization, it's part of a worldwide phenomena. It's a most efficient way of carrying on the business of living, of providing the amenities, the better standards of living. We know there are risks involved in all this, whether it be from the automobile accident or the pesticide or the air pollution. But for this particular conference, I suppose, even more important is how can we identify these risks? How can we identify the benefits? How can we evaluate their relative significance?

What are our criteria for doing these things and what is our system for bringing them into the total equation so we can handle them in some manageable way?

Look back in history, as mentioned earlier, about the cholera, the typhoid, or what have you, undoubtedly these were difficult problems, but I feel certain that the benefits versus the risks in those equations were somewhat simpler to work out than the ones we are facing today. This is an old saying, but I feel that the equations are a lot more complex today than they were in those situations. At that time we were dealing with questions of the chlorination of a water supply, or pasteurization of milk, the costs these measures might involve, as against the value we receive in the control of disease. Now we are getting into situations where every single decision, whether it be on a problem relating to radiation or one involving air pollution gets into a whole lot of different areas, even international ones in some cases.

Even assuming that we can evaluate to some degree the physical health aspects of these problems, we must move to other quandaries. What are the social effects of these environmental conditions? I feel sure that we all know basically that there are social effects of environmental conditions. If we have a blighted, poorly maintained neighborhood, this does things to people. It does things to the children that are coming up in it. There's a mental attitude. There is a social aspect to these things that undoubtedly is difficult to measure. It is difficult to pin down, but it's there. We are confronted with the immediate steps of trying to work out what are the real health hazards involved in terms of physical health.

Moving on into mental health, what are the social aspects of these environmental conditions. Are these some of the aspects of progressive public health? Should public health include more consideration of the economic problems? An example is the doubling of the costs when a homeowner in a suburban area has first to rely on private wells and septic tanks and then to protect his family's health, has to pay again when a public system is installed. Or again, what are the implications of undue and unwarranted concessions given by a local government to attract an industry, i.e., relative freedom from their responsibilities to properly handle their air or wastewater treatment problems? What about the mechanisms through which health protection, that is positive health contributions, can be achieved in the modern urban setting? There are the political science questions, questions in public administration and on the metropolitan planning process.

And now, having asked all these questions, I come to another aspect. What is the role of the health agency and the health specialist in urban planning for environmental health? Let us say and hopefully agree that, generally speaking, the objectives of planning are importantly related to the protection of the public's health and welfare. I think if you will look into your own planning legislation (the preamble to the code), into the state legislation, or even the federal legislation, you will find that statements of the objective of planning are to protect public health. This being true, why are we confronted with these doubts about the way in which urban development is affecting and will be affecting the health aspects of man's environment? I'm talking here, of course, about all of the subjects that are listed on our agenda, the air, the water pollution, the mounting problems in solid wastes, the noise, the radiation hazards and perhaps the mental hygiene aspects of living in a bumper-to-bumper, sardine-like situation. Well, in all honesty, I suppose if one tried to assess the responsibility, that we've all got to take a share of it.

The health specialist has been satisfied too much with developing his programs to solve a specific problem. He finds it difficult to weave these technical criteria into the fabric of the complex urban scene. Too often, the health specialist has been content to stay in his corner, come out and make a statement, and then duck back into his corner and say he's made his pronouncement, "now you go ahead and work it out."

Then we turn to the urban planner who I would say is confronted with a problem and has a share of the responsibility which he hasn't been able to shoulder. It boils down to the very important point that he lacks the tools and the criteria to deal with these specific problems. He may not understand the subtleties of these various aspects. He can't, he's a generalist and requires a lot of help in each specific area. He can't go all the way from transportation on the one hand to solid wastes on the other and be an expert in all of them. He has got to have some tools. Too often these are not available.

And finally, the elected official or perhaps the man in the street has been too prone to erroneously assume that everything will come out o. k. -- until the roof falls in.

All right, then, what should be done? My message here today is to say that in the environmental health aspects of urban planning, we need to bring health competencies into that process. How can this be done? Well there's a variety of ways. It is possible to develop planning - type criteria for environmental problems that can be cranked into the planning process. For example, I think it is perfectly feasible to take into consideration meteorology, stack height, types of pollutants, and land-use in relation to industrial vs. residential areas, and come out with some pretty good planning-type criteria that will provide valuable controls with reference to air pollution. Incidentally, I was interested in Miss Blatt's comment about the smoke chart. I suppose she hasn't kept up, but if she checked now on what the current criteria are for air pollution inspectors, she would find some pretty complicated gadgetry compared to the smoke chart. This is symbolic of what goes on in many of these fields.

Currently, we have underway an interesting study in cooperation with the Urban Land Institute, Housing and Home Finance Agency, on neighborhood home planning. We're studying a kind of neighborhood approach called "cluster" housing. It's a little different configuration of housing as compared with the usual urban pattern. Here you combine a number of different things. You combine economics with reference to installation of water and sewer facilities, and you can perhaps cut down the traffic accidents by the way the streets are laid out. You can get more concentrated land use, and still maintain some of the aspects of open space, which is good.

All of these will undoubtedly have some economic and social effects which we are trying to seek out in this study. We are hoping to develop some criteria that can be used by the health and planning agencies for neighborhood design. There is this whole question, then, of the development of criteria that can be utilized in the planning process. Incidentally, I think they can be used by more than the planning agency. I feel certain that some of the Internal Affairs work here in legislation might be benefitted by some of the patterns of inter-governmental cooperation that might develop out of the kinds of studies and research that can indicate patterns for local agency cooperation.

The health agency has a responsibility to evaluate urban planning in terms of its health implications. I feel there are many things in the urban plan which are not evident on the surface. I can give you an illustration in a field which is quite different, but perhaps does indicate some of the potentialities. A good many years ago when the push came for development of major water resources in terms of dams, and so forth, in the southern part of the country, questions were raised as to whether these kinds of developments might not seriously contribute to the already existing malaria potential of that area. That is, water impoundments were known to cause breeding of the malaria mosquito. Therefore, in the improvement of the area from the standpoint of its water conservation, economics, etc., we might also have an adverse by-product in terms of malaria which would nullify to some extent, through bad health, the gains that were achieved in other ways. Over a period of years, a preventive system of developing these water resources projects in terms of their malaria potential was worked out. This was done through a variety of approaches. There were some specific design factors, for example, clearance of the shorelines to prevent emergent vegetation and breeding places. Such things were incorporated into the original design but there were other factors, such as the operation of the system to cause water fluctuation. You had to look at the pattern, the whole scheme of things, in order to get an idea of whether or not the malaria potential had really been taken care of. And this became a function of a health agency, working in cooperation with the groups who designed and constructed these water resource developments.

I say that this kind of an evaluation is becoming more and more important in terms of urban planning. It's a complex system; there are many things that will not be evident on just a cursory glance. Over the years, I think better ways to evaluate urban planning and design from a health point of view can be evolved. In essence this is the second responsibility of the health agency, first to develop criteria, second to test or evaluate it.

The third responsibility is equally important and perhaps even more so. I think that the health agency, the health specialist, has the responsibility to defend the plan once it has been developed. I was very much impressed about a month and a half ago when I was at a conference similar to this and an industrial planner got up and said, "We come out with a plan and then we get into trouble. We face people who are opposed to it; there are some problems connected with it. Where is the health agency when it comes to defending that plan and making it stick?" I think there's an important function here. If health is one of the basic objectives of urban planning, and if we can build health protection into urban planning, then the health people have a responsibility to defend that plan and operate in accordance with it. In this way we get the maximum effect of combined efforts of all groups that are involved. So these, I think, are the three responsibilities of health people in regard to urban planning.

Today we hear a lot about the hostile environment of outer space and other planets. I submit to you that man's earthy environment also can be hostile. The solution of the problems we have here also may effect those in outerspace.

I agree with some of the statements made earlier. I'm not a believer in the omniscience of the federal government. I think that in the American system there is an inter-dependency of the local, state and federal government which is fundamental to everything we do, I can think of no area in this inter-dependency more critical than dealing with the urban problems. So when I think of "progressive public health," I think of concentrating on the urban problem. I think of doing it in a concentrated way, in terms of looking at all the kinds of problems, and trying to see how one effects the other and in being sure that in solving one, we don't contribute to the other. I think it involves comprehensiveness in terms of geography. There's no question in my mind but that we're moving in the direction of a sort of a metro-wide or perhaps a region-wide approach in solving many of these problems.

We are moving in the direction of planning to prevent. I hope that through progressive public health, we can develop an environment which will contribute positively to the public's health. I think that our role in the Public Health Service is to assist the state and local governments to move in this direction. I have great confidence that through meetings such as this conference, some of our inquiries, some of our seeking, will turn into achievement.

WATER SYSTEM PLANNING - Samuel P. McBride

Water, literally, is life. Only air to breath and food to eat are its equals to human well-being. Water may not be noticed when it's available but when it's missing, everybody notices - everyone suffers and practically everyone complains.

The demand for water in our civilization is mounting so fast that it is often difficult for communities to keep up with it. In the average American home today, each person uses 60 to 75 gallons of water a day, and each year we increase our use another gallon a day. Not only is the total use increasing but so are the demands for adequate rates of flow and pressure at peak hours to satisfy such twentieth century conveniences as automatic dish washers, clothes washers, garbage disposals and swimming pools.

Good water service of course, as in all things, depends upon where you happen to be, where you happen to live, in which region you may be living, and certainly, in what country you may be living. If you are living in Calcutta, India, good water service today, if you had it, would consist of being able to get drops of water out of your faucet more than four or six hours a day. This implies that you would have a pressure in the water distribution system that might at times rise as high as five to ten pounds per square inch. Now this concept of water service is quite different from ours. Or consider another area where water service might be called good if you can get as much as two gallons per capita per day, under the most favorable circumstances. As water purveyors there is a great deal of difference of opinion as to good water and what good water service is. However, I believe that the majority of water purveyors believe that it is our responsibility to provide water in any amount that the customer is willing to pay for. We want to give our customers the best possible water service that we can provide.

Everybody benefits from good water service. From the monent we get up in the morning we are dependant on water for bathing, sanitation, shaving, breakfast, dishwashing, cooking, laundry, car washing and scores of everyday uses that the average American takes as a matter of course, yet our family's health and that of our neighbors, depends upon safe, palatable water.

Not everyone in town stops to realize that your community becomes a more attractive place to live if there is an unfailing water supply. Schools and hospitals must have it as well as fire departments and sewerage systems. Lawns become lush, gardens bloom and recreational grounds and parks are nourished. All without fear of sudden curtailment of water.

Actually, problems resulting from the need for more and better water service grow gradually. In recent years more babies were born and more people live longer. The extent of the problems are borne out by a recent U.S. Geological Survey of over 1,000 water systems. It was found that 51% reported water shortages because of the populations growth, besides the increasing variety of uses by all customers. Between now and 1975 the nation will have to provide for sixty million more people. Your community should get ready now for its share of this growth.

Adequate service today means an attempt, at least, to supply all customers all the water they want, whenever and wherever they want it. Adequacy, reliability, quality and financial soundness are the goals. This type of service requires recognition and provisions for peak demands, even those of short duration. The changing nature of water utility operations requires the extension of service from the compact center of a core city to remote spots. Service demands for several thousand people can spring up in a season. These spot developments occur in many directions at one time and usually on the highest ground furthest from the water plant.

Peak demands that cause most difficulties occur in the outer fringes of the system. Extreme peaks may affect all customers, if a particular element of the system is weak. Generally when a system supplies reasonable year around service to the outskirts, the core area is properly serviced. Extreme peak demands like those that caused a wide spread outbreak of shortages a few years ago, are usually brought on by relatively prolonged dry spells in the early summer, extremely hot days and nights, and a high rate of industrial and commercial activity. During the past 5 years industrial activities have been relatively high, although it has risen and fallen sharply. Many conservation practices have been initiated as a result of previous shortages and prolonged hot, dry periods have not occurred in many areas. Even where total rainfall has been insufficient, rain during critical summer periods has curtailed the trend toward peak demand periods. Nevertheless, in most systems the booming residential, commercial and industrial developments in outlying areas are the potential trouble spots for peak demands when the weather cycle changes.

Shifts of population and industry often result in substantial changes in the balance of a water system and radical differences in the characteristics of a part of the system.

The nation is water rich, the shortages are in reservoirs, treatment, pumps, and pipe lines. The problem is local, for if your community doesn't deliver all the water that consumers want you have a shortage.

What's behind these and other community headaches? Let's look at the true picture. At sometime or other during the average year, one out of four Americans will have to get along without full water service. On a hot summer day almost half of the people who depend upon public or private water utilities cannot be sure of enough water to put out a major fire. Obviously, many communities are failing to provide for current or future growth. Why? What are the road blocks to maintaining a public service so essential to a community's life and progress.

The problem in your community may have developed slowly over the years as your town has grown. Generally, people have failed to understand and appreciate the need and enormous advantages of a better water system. Our exploding population, expanding business and increasing use of water for diverse purposes have all imposed great strains on water services. If you haven't prepared for the future you won't of course be able to meet demands when they are on top of you. Most water shortages are symptoms of a single disease, lack of advance planning.

Here are some cases that actually happened. Because of an inadequate water supply six businesses rejected one north-western town for their plant location. The distribution system was so overloaded and fire flow and pressure so poor that a serious fire could threaten the entire community. In one New Jersey area the water supply was so low that old water wagons had to be towed along behind fire engines. Schools may have to close down on certain days during dry spells. It happened recently in a Mid-west town - until they drilled five new wells and laid new water mains. Hospitals may have to hoard water in containers for emergency use. It has happened in California and many other States. Because of lack of pumping facilities or low water pressures in your expanding towns, you may have to ban lawn sprinkling and car washing. It has happened in hundreds of communities. In many towns for instance, lawn sprinkling has been limited to even numbered houses on even numbered dates and odd numbered houses on odd numbered dates.

A fine of $200.00 or thirty days in jail may be levied for leaking faucets and restaurants may be permitted to serve water only on request. That occurred in New Jersey.

Residents may have to queue up before water bars where distilled water sells for 50¢ a gallon. It happened recently in a southern city where it became illegal to use water in swimming pools or on golf courses, and water was not permitted to flow constantly in certain business establishments. In three Kansas towns water had to be hauled in by tank cars.

New home building can be stymied - in one New York suburb an injunction suit was filed to halt further construction until existing homes were assured of enough water.

These extremes grow slowly. They sneaked upon towns through lack of sufficiently early planning. Once maintenance and expansion projects are allowed to get out of hand, catching up simply imposes a double hardship on all concerned. It makes sense to plan improvements far enough ahead so that you are not needlessly rushed, during a critical shortage, into hasty, ill advised, decisions and financial arrangements. (AWWA Journal, page 1343, 1961).

The creation of a planning commission or planning board within the past 20 years in North America has been of considerable benefit to the planned development of all municipal services. Without a major plan for water supply improvement as a part of the master plan of community development, the utility has no help in assessing the advisability of major land development schemes when these schemes are placed before it for comment and approval. The scheme is likely to gain approval, and the utility later finds that untimely and unwarranted extensions are required to supply service to it.

Municipal and area planning commissions have been of invaluable assistance to the water supply engineer in the determination of future water requirements. They maintain studies of present land use, population statistics by census tracts, building permit records, established zoning principles indicating immediate areas of anticipated growth, and population forecast for 20-30 years in the future. Even if the utility does not agree with their findings and proposals, it must be admitted that the planning authority has been established as a technical body, operating at a behest of local government to provide a realistic development plan for improving future living conditions in the area, unless major objections to the policy are clearly in order. Therefore, the utility should recognize this municipal service and use its basic information in establishing the development plan.

From existing land use, plans, and studies, as well as from aerial photographs, residential, commercial, and industrial establishments of various densities and types can be located. Statistics on water consumption by meter district and major commercial industrial consumers can then be utilized to establish unit acreage consumption rates for water in areas of varying type and density. Such unit rates, when applied to the existing land use figures, should provide a total water consumption figure equal to the current average consumption. The latter figure provides a check for the exercise. If reasonable similiarity cannot be established, the land use figures and unit consumption figures must be reviewed until the gross figures are consistent.

It is then practical to forecast the areas of future growth according to zoning by-laws, estimating the degree of saturation within the planning period. Existing areas must be reviewed in similar fashion to determine the possibility of redevelopment and its affect on density and type of land use. Blighted areas of the old city may be converted to residential or commercial developments. Population forecast established by the foregoing procedures must, however, when added up, concur with the actual forecast established for the whole area.

Once the plan of future development is confirmed with the agreement of the planning commission, unit water consumption figures can then be applied to areas of various density and type to establish the forecast of average demand for the end of the planning period. These unit figures must be derived from current applicable consumption rates, but with allowances for an increase in use of water. Errors may creep into these unit figures if full cognizance and study are not given to the value of existing unit figures. Industrial and commercial unit acreage consumption rates must be determined with care. Private concerns, often establish themselves on enough land to double the size of their plants in the future. Such extensions would double existing unit consumption rates. Redevelopment with allowance for open land in new housing schemes generally does not materially affect the original unit consumption rates but changing land may do so radically.

The increasing use of water by people in all types of development at rates of 0.5 to 2.5 gallons per capita per day, per year, must also be taken into account in any future unit rates. Furthermore, lawn watering restrictions, areas with septic tank use, areas of low water pressure, and the probability of continuing use of water from private sources requires evaluation.

With these estimates and forecasts, a general plan of future water use in the municipality can be developed and point loads can be assigned throughout the service area. The point load assignments are based on 1,000 acre blocks for larger utilities and 100 acre blocks or less for small systems. This gives a forecast of average water requirements for the planning period, and the forecast is actually plotted with relation to the growth pattern forecast to establish distribution requirements.

The estimates of useage discussed so far have been of average demand. To use this forecast plan for distribution planning, an assessment of maximum day and maximum hour requirements for water must be made. The overall municipal figure will be based on projecting past patterns into the future. Ratios of maximum to average use will become higher because service will be improved. Lawn watering and other restrictions will be lifted. Area types will, however, vary in peak demand requirements and peak demand periods. Industrial and residential peaks are generally not coincident. The distribution forecast plan must be modified for peak hour analysis, checking for both industrial and residential peak requirements.

A further requirement that must be considered in laying out the distribution loads is the allowance for fire fighting. In smaller utilities this must generally be added to the peak hour demand. In larger communities peak hour requirements at reasonable delivery pressures are generally satisfactory for meeting fire requirements. It is unlikely that requirements can reasonably be forecast further ahead than 20 years. With the above procedures however, a sound basis has been established for the distribution requirements of the municipality and the supply requirements of the system for a significant period in the future.

Unfortunately all utilities have not had the advantage of a county master plan to follow in preparing their own master plan. Let me give you an example of my own water system, the Beaver Falls Municipal Authority. Beaver County, where we are located, does not as yet have a master plan. However, I am glad to report that they are preparing one at the present time. The Beaver Falls Municipal Authority provides water service to approximately 15,700 customers comprising a population of 75,000 persons in the City of Beaver Falls, 9 adjacent boroughs, and 7 adjoining townships, all in Beaver County. The district served by this water authority is roughly 30 miles down the Ohio River from Pittsburgh. The first water mains in Beaver Falls were installed in 1868 by the Economy Society. The source of supply was local springs. In 1883 the Beaver Falls Water Company was established and constructed a pumping station, water mains and reservoir in Beaver Falls. In 1902 the Beaver Valley Water Company was formed and the several water companies serving the adjacent boroughs were inter-connected and served by the new company which operated two pumping and purification plants.

In 1940 the Beaver Falls Municipal Authority was created and bought the Beaver Valley Water Company. By 1956, after fifteen years of operation, the system had been expanded from 135 to 190 miles of water mains and approximately 4,000 new customers had been added to the system. The average daily amount of water delivered to the system had increased 72%. The authority board and officials were alerted to the fact in 1956 that due to the growth of the system it was necessary to increase production, along with pumping and transmission facilities, in order to give satisfactory water service to the consumers. A program of construction was planned to carry out this work which began with the 4,000,000 gallon addition to the Eastvale Filtration Plant. Between 1956 and 1959 we added capital additions in the amount of approximately $2,000,000 to the plant and a few distribution lines. During the year 1959, directors of the authority commissioned the consulting engineers, Michael Baker, Jr., Inc. and Pitometer Company, hydraulic experts, to make a study of the entire system.

The study of the Pitometer Company consisted of the following items:

(1) the division of the system into sections by valve operation, and the measurement of the consumption in each of these, for a 24 hour period, by use of recording pitometers;

(2) a study of the present water consumption and fire requirements in the system as a whole and in various sections of the system, and a determination of the probable water consumption and fire requirements in these sections 15 years hence;

(3) a study of the probable increase in population during the next 15 years, in the City of Beaver Falls, the boroughs, and in various sections. This also included studies of the probable location and growth of industrial districts;

(4) investigations to determine loss of head and coefficient of friction in trunk mains where it was deemed advisable. Investigations at various points of the distribution system where present facilities appear to be inadequate, for the purpose of determining if reinforcements, extensions, or cleaning of mains was necessary;

(5) design, general details, and specifications for reinforcing mains necessary to meet present needs and future requirements.

After the field data was collected, both engineering companies made their own population forecast and expected requirements for 15 years in the future. It is very interesting to note that both engineering companies came up with practically the same answer for the distribution system, future populations, and water requirements. Our own consulting engineers, Michael Baker, Jr., Inc., carried this a little further into the plant capacities and sources of supply. The program was set up for immediate construction, for construction in 5 years, for construction in 5 to 10 years, and for construction in 10 to 15 years. The program set up for future construction is flexible as it is based on probable populations so that they can be speeded up or slowed down to keep pace with actual trends. The 15 year plan calls for an expenditure of $3, 500, 000. At the present time we are well along our way in carrying out these recommendations, and we believe we will be able to supply our customers with an adequate supply of water during the next 15 years.

How can communities solve their mutual problems through proper planning?

In the past decade, the increased population, the two car families, and the suburban development, have brought added problems to planning and development of utilities. We are beginning to have metropolitan areas and public officials must recognize this fact. Public utility men and political scientists, accustomed to a wide view of government functioning, see problems as metropolitan in scope and seek to overcome them by a regional approach.

There are still too many public officials who want to be "big fish" in a "little pond" rather than work together for everyone in the area. Their thinking has not developed to the point where they can comprehend that the central towns will benefit as the area develops.

Henry D. Harral, Government Advisory Associate, Fells Institute of Local and State Government, University of Pennsylvania, now Pennsylvania Secretary of Highways, in a paper presented June 21, 1962, at the Annual American Water Works Association Conference, proposed a metropolitan approach to utility services. He stated there is no royal road, no single, easy way to attain regional unity in metropolitan communities.

He considered the experience, advantages, and disadvantages of the following agencies or methods for supplying utility services to a metropolitan area.

1. Central city
2. The urban county
3. Metropolitan district
4. A federated government
5. The inter-jurisdictional agreement
6. A private utility

The central city is possibly the earliest and most widely used agency to supply utility service to a metropolitan area. History would not substantiate the notion that this was a deliberate approach to supplying services to a metropolitan area. The central city happened to be the first to face the need for water and other utility services. Service beyond city boundaries most likely just grew. A rate differential for supplying out of city service is surely a sign that this was done grudgingly. Several cities have refused to supply service outside their boundaries, unless the areas were annexed. In some cases the central city has achieved unity of government in its metropolitan area through such annexations.

Detroit, Michigan has developed a more systematic method of central city supply of water for its metropolitan area. The decision was reached that one water system would be most advantageous to all the areas, and that the central city was a logical agency to supply the water. A board of seven appointed by the mayor of Detroit is responsible for the system. Three of the seven are non-residents of Detroit, one each from various counties. More than 50 municipalities are served with water from the Detroit system on a contractional basis. Distribution of the water is made by the individual municipalities. They pay for the water based on the flow through a master meter and make their own financial arrangement for main construction and collection of water revenues.

Fewer urban counties have been suppliers of utility services than have central city. In Pennsylvania, Delaware County is providing incinerators for all its municipalities. Los Angeles County, California has emerged as a major coordinator of government for a metropolitan area.

For a county to be the strong contender for the role of supplier of utility services for a whole metropolitan area, its boundaries would have to be about the same as those of the metropolitan area, and development and timing would have to be favorable. Such a situation would be unusual, but where it exists the urban county would certainly be a most appropriate agency to supply utility services.

A metropolitan district has often been called on to provide utility service for metropolitan communities. Sometimes they are the same as utility districts, sometimes they provide several utility services, some are state imposed, some are locally instituted, and some are the result of interstate compacts.

The authority has been the usual device used when two or more municipalities wish to join in the furnishing of utility service. There is no governmental taxing power. Facilities are usually built and operated by monies earned as a service charge. Management is once removed from the electorate through a joint board appointed by elected officials. Joint municipal authorities are usually single function agencies. Rarely do they ever approach providing all the utilities of a metropolitan area. It is quite common to find quite a few authorities within a single region. Their very existence, with separate facilities and separate financing, make it difficult to envision in such circumstances, a single agency serving the entire region. However, with proper planning and setting aside petty community jealousies, these various authorities could and should be combined under one operation for the good of all concerned.

A metropolitan federated government can be studied to solve the metropolitan problem of its area. The City of Toronto, Canada, applied to the Ontario Municipal Board for the amalgamation of 13 municipalities in one city. The application was violently opposed by 11 of the 12 suburban municipalities and was denied. Instead, the Ontario Provisional Government created a metropolitan government charged with the responsibility of providing those services which are metropolitan in nature and left to the local governments services that are local in nature. This system seems to be working out fairly well in the Metropolitan Toronto area. In Dade County, Florida, the same thing has developed. Water was supplied by forthy six separate systems, sixteen publicly and thirty privately owned, to only 84% of the residents. Seventeen sewerage systems, eight public and nine private, served only 38% of the people. A water and sewer section in the County Public Works Department correlates activities of the privately owned companies and is developing an area wide master plan for water supply and sewage collection and disposal. There has been a proposal that the county purchase and combine all the private systems. Much can be learned from the Dade County experiment in the future, perhaps. For the present, the picture there is much like the confused pattern elsewhere for supplying utility services to the metropolitan community.

Inter-jurisdictional agreements are quite common in utility service. In a five county area in south-eastern Pennsylvania are 75 inter-jurisdictional agreements, seven joint authorities, and one joint board for sewage disposal, for sewerage alone. The number and extent of these agreements makes it clear that here is no metropolitan approach to the supplying of utility services. It is a rather "piece-meal" sort of "crisis-by-crisis" effort to solve immediate problems on a limited basis for small areas.

A private utility may not seem a serious metropolitan approach to the provision of utility services. Yet the Philadelphia Electric Co. serves a large part of the Philadelphia metropolitan area. The Philadelphia Suburban Water Co. serves many of the Pennsylvania suburbs ringing Philadelphia.

The central city, the urban county, and the metropolitan district offer, in Mr. Harral's opinion, the best devices for supplying utility services to a metropolitan community. Timing is a most important element in their successful use. The metropolitan district or authority will be called on most often, particularly in multi-county regions and in metropolitan areas across state lines. Business prosperity depends upon good water service. It is obvious that water is basic to virtually every commercial and industrial enterprise. If your town can profit from a good injection of new business ventures, an abundant water supply can be one of your best attractions. New enterprises mean new construction, more jobs, more customers for merchants, and increased tax rates for your town. One of the first questions asked by businessmen seeking a new location is, "How is the water supply? " Wide awake communities are actually aware of that. With ample water, businessmen seeking a new location may come to your town. This can be done by proper planning. A well managed water utility will provide this service to the community. They will know the systems weaknesses and have a long range or master plan to provide the best possible services for now and in the future.

Every community served by a water utility, either private, municipal, or authority operated should be in a position to satisfy the needs for good water service. Those responsible for planning in a community should cooperate with the utility as to their requirements and plans. If no plan is available, planners and far sighted officials should suggest a comprehensive study be made by competent engineers to determine the difficulties and propose and set up master plans for future work. In order to accomplish this and keep the water system in an adequate condition a proper design rate schedule must be maintained. Rates may need to be adjusted to provide an adequate service. Antagonism to rate increases comes because of the high percentage of increases that is usually required. Annual improvements, together with smaller, more frequent rate increases would reflect the experiences our customers have with other products and services they buy. They could understand the need for smaller and more frequent rate increases if they could also enjoy constantly good service with a quality product which is improving from year to year.

You gentlemen here today, through your influence and backing can initiate a program for adequate water service in your communities. By bringing the subject to light and preparing definite programs for needed improvements. Through formation of local committees of prominent leaders of your community, irregardless of political beliefs, get the proper man or men for the job and you will get the required results.

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BEGINNING OF A NEW ERA (Sewerage Problem) - Dr. Hugo, V. Mailey

As Dr. Wilbar, Chairman of the Sanitary Water Board stated, on December 12, 1962, when the Wyoming Valley Sanitary Authority was created, "This is an auspicious occasion for a major program of Pennsylvania -- the clean streams program. The formation of the Wyoming Valley Sanitary Authority marks an important milestone in the history of Wyoming Valley communities. I am confident that this Authority will now proceed without delay to accomplish this purpose and that soon we will be witnessing the construction of sewage treatment facilities that will adequately serve the people of the Wyoming Valley."

Health and economic growth are dependent on clean water. Clean water is an indispensable asset for industry. Those communities that can provide industry with clean water can offer a valuable inducement to retain existing industry and attract new industry.

No one has learned with more stark reality the importance of providing clean water for industry than the community leaders in the Wyoming Valley. Industry after industry has been lost because of the pollution from sewage and from acid mine drainage.

It has become crystal clear that if the Wyoming Valley is to take advantage of the abundance of water for economic growth, the pollutants will have to be removed as quickly as possible, at reasonable cost, and on a cooperative basis, with full citizen support.

The Public Services Committee of the Greater Wilkes-Barre Chamber of Commerce has never lost sight of the fact that the solution of the sewage problem bears heavily on the rehabilitation and redevelopment of the whole area. It is clear that today action toward abatement of stream pollution is of the utmost urgency for a number of reasons: (1) the lack of clean water for industrial use has delayed the industrial and residential development of the area; (2) in spite of the federal and state grants now available, the rise in the construction costs, together with the increase in the legal fees and services make it more expensive with each delay; (3) the delay is causing this area to miss appropriations for federal and state funds, as many other communities in the State receive priority and preference.

BACKGROUND OF THE AUTHORITY

As long ago as 1944, the Commonwealth of Pennsylvania ordered Wyoming Valley communities to provide primary sewage treatment plants. While the matter was in the hands of the Attorney General, the City of Wilkes-Barre attempted to bring about regional cooperation for the sake of economy. This early unification effort ended in failure.

In the fall of 1951 the Greater Wilkes-Barre Chamber of Commerce recognized the urgency of the situation by creating the Public Services Committee. As a result of discussions with the Sanitary Water Board, the committee set about collecting information for a feasibility report for a joint project. An engineering firm, Albright and Friel, Inc., was employed to study the advantages of a joint project. Many meetings were held from 1954 until 1956; however, all of them ended in failure.

While quite a number of communities expressed their willingness to enter into a joint project, the larger ones -- chiefly Wilkes-Barre, Kingston, and Nanticoke -- manifested no indication to join together. As a matter of fact, the Wilkes-Barre case eventually ended up in the Superior Court of Pennsylvania. The city lost its appeal in November of 1962, in an attempt to have set aside the order of the Sanitary Water Board to discontinue contaminanting the Susquehanna with its domestic sewage and industrial wastes.

In the spring of 1962, preliminary meetings were again held by the Public Services Committee with a view to securing ordinances for a joint authority. After a series of informal meetings by all the participating municipalities, and in December 1962, the last of the municipalities executed the Articles of Incorporation for a Joint Sanitary Authority.

PRINCIPLE OF INTERGOVERNMENTAL COOPERATION

The desire of people in localities for the municipal services like the wants of Adam Smith's economic man appears to be unlimited. While there is some lag in the economic capacity to pay for these services, a frustrating bar to them often appears in the form of lack of authority because of legal and geographical problems. The real problem is to make the political boundaries coincide with the areas containing those persons wanting municipal services.

If it is a matter of making sets of boundaries coincide, then the boundaries ought to have some solid reason for existence. They do. They are imbedded in the political culture of our times, indigenous to the concept of constitutional government. There is also an economic reason for the political boundaries. Despite any theory that taxes are levied on the basis of ability to pay and are spent without regard to benefit of individual taxpayer, taxpayers are reluctant to pay taxes which are to be used for the benefit of persons who have not shared in their payment.

Therefore, the need for intergovernmental cooperation is a sign of the unrealistic nature of present local government boundaries. Cooperation among local governmental units for the administration of services to the people is on the increase and has taken on many forms.

There are 2 primary forms of governmental units which are empowered to deal with the sewage problem in Pennsylvania. The first is any single, or combination of, on a cooperative basis, municipal governing bodies of cities, boroughs, or townships; the second is an authority which is created by one or more political subdivisions, again on a cooperative basis.

Justifications for the principle of intergovernmental cooperation are many:

1. Cooperation is congenial to local political conditions.
2. Cooperation is effective with respect to the performance of functions which are politically neutral.
3. Cooperation as a device for changing jurisdictional areas to fit areas needing a common service shifts responsibility emphasizing the quality of these officials.
4. The fact that cooperation has arisen in response to needs felt by people who are shaping the device to fit the circumstances as they see them, makes for a reliable toughness.

Furthermore, joint municipal facilities or services can usually provide economies and efficiencies that no individual community, particularly of small size, can hope to provide. This is especially true and most readily apparent in areas such as Wyoming Valley where there are a large number of contiguous, small governmental subdivisions, forming one solidly built-up area.

FORMATION

The uniform ordinance creating the Authority stipulated that each participating municipality appoint one member per 15, 000 population of fraction thereof. On the basis of this formula, the 14 participating communities created a 20-member Board of Directors.

On December 12, 1962, the members of the Authority met for the purpose of organization. They were sworn in by the Honorable Judge Frank L. Pinola, President Judge, Luzerne County Court of Common Pleas. The By-Laws were approved and officers elected.

ADMINISTRATION

The Authority has set about the business of administering the affairs of a $20,000,000 operation, eventually to be second in size only to the Allegheny County Sanitary Authority. Four committees have already had numerous meetings in order to expedite the preliminary plans and construct interceptor lines and a sewage plant. These committees, are Finance, Engineering and Construction, Community Liaison, and Property and Law. The Chairman of the Board of Directors serves ex-officio on all four committees.

SERVICE AREA

The Wyoming Valley in Luzerne County is that urbanized part which lies on either side of the Susquehanna River, from the County line on the Northeast, to Nanticoke City on the Southwest, and includes some 30 communities ranging in population from 250 to 64,000.

The 1960 population of the 14 communities which created the Authority is 184,237. The 14 communities lie on both banks of the Susquehanna River in central Luzerne County -- 8 on the West Side and 6 on the East Side. The service area begins at the upper end of Luzerne County with Pittston City and extends along the River to Nanticoke, a distance of 15 miles.

The population of the 14 communities contributes approximately 17,000,000 gallons of sewage per day into the Susquehanna River, with the City of Wilkes-Barre contributing about one-third of the total. About 60,000 dwelling units will be served by the facilities of the Authority. The 14 communities have 412 industries, employing 27,236 employees, within their borders. The City of Wilkes-Barre ranks first in both, with approximately half of the total in each category.

In addition to serving the 14 participating communities, the Authority also hopes to serve at least a dozen other neighboring towns, all in Luzerne County, whose population numbers about another 40,000. Included in the areas already contemplated in the Authority are the towns on the periphery of the 14 member communities.

If the additional communities which do not have facilities for the treatment of sewage, and feel that the cost of constructing their own facilities is prohibitive, make requests to use the customer service, the total population served by the Wyoming Valley Sanitary Authority will reach about 230,000. These additional communities have 43 industries with 1,472 employees.

ENGINEERING

With the recent formation of the Wyoming Valley Sanitary Authority, it is now desirable to update the material developed in the original Report. The following factors need to be considered in updating the Report:

1. Population change - decrease of about 15%.
2. Rise in construction costs.
3. Changes in financing requirements, including new sources of financial assistance.
4. Technological improvements in treatment plant design.
5. Changes in industrial plant requirements.

Considering a federal grant of $2,400,000 under P. L. 660 (for a joint project), the contemplated increase in sewer rentals should not be too burdensome on dwelling unit owners. There is also the possibility of a federal grant under the Accelerated Public Works Program, since Luzerne County is classified as a distressed area.

A NEW SPIRIT

It has become quite obvious that any more delay in the abatement of stream pollution is bad public relations for the whole region. It is more than mere coincidence that the areas of high unemployment in the State are the same areas that lack sewage facilities.

In this decade the public official in Wyoming Valley has come to a keener realization that the problems of his community can still be handled at the local government level. He is well aware that the old methods, techniques, procedures, and structures are obsolete. Local public officials now realize that community vitality and growth depend on creative human resources and good human relations. Small town government, as the local public official knows, when it fails to meet the needs and challenges of the community, is in danger of submergence and a withering away of its functions.

Every local official, while still jealous of community pride, has come to understand that all communities in our area sink or swim together, and that the economic well being of one community affects the others. The creation of the Wyoming Valley Sanitary Authority is an outstanding example of the spirit of intergovernmental cooperation in which 14 municipalities in Luzerne County are working for the common good of Wyoming Valley.

The Public Services Committee of the Greater Wilkes-Barre Chamber of Commerce has never lost sight of the fact that the solution of the sewage problem bears heavily on the rehabilitation and redevelopment of the whole area. It is clear that today action toward abatement of stream pollution is of the utmost urgency for a number of reasons: (1) the lack of clean water for industrial use has delayed the industrial and residential development of the area; (2) in spite of the federal and state grants now available, the rise in the construction costs, together with the increase in the legal fees and services makes it more expensive with each delay; (3) the delay is causing this area to miss appropriations for federal and state funds, as many other communities in the State receive priority and preference.

THE SOLID WASTE PROBLEM - Ralph J. Black

The basic requirements for satisfactory disposal of solid wastes were clearly stated by Hering and Greeley(1) over forty years ago as: "(1) absence of danger to public health, (2) minimum nuisance to the public, and (3) minimum expense that will effect a sanitary disposal of all refuse materials." These requirements remain unchanged for current conditions if disposal is considered as encompassing all aspects of solid wastes handling.

With continued urbanization, which results in the formation of vast metropolitan areas, efficient solutions to our solid wastes problems demand increased mechanization and more effective use of engineering talents. In urbanized areas, local officials now find that solutions to their problems are becoming increasingly difficult and costly. Not only has the public constantly demanded ever higher levels of sanitation, but the commonly used methods have appeared so simple that in many instances insufficient records are kept to determine unit costs of present methods or to realistically plan for future needs.

The storage, collection, and disposal of solid wastes is one of the major problems of urban areas. As the American Public Works Association(2) recently pointed out, "The annual outlay for refuse collection and disposal services -- over $1.5 billion -- is exceeded only by expenditures for schools and roads." In addition to the expenditures by local governmental agencies, the editors of Refuse Removal Journal(3) have estimated that the annual expenditures of the private sanitation industry are over $1.3 billion. From the standpoint of the average person, these costs can no longer be considered minor. For example, the Washington Suburban Sanitary District charges the average homeowner $40.20 per year for water and sewer charges, and $30.00 per year for refuse service. Thus, the refuse service charge amounts to 43 percent of the total charge of $70.20. Last year actual expenditures for refuse service were $31.18 per household, so the rate will probably have to be increased.

As Rogus(4) pointed out, "Excluding industrial wastes, the total refuse production ranges from 1100 to 1700 pounds per capital per year with a median weight of 1450 pounds, or about 4 pounds per capita per calendar day. The amount actually collected for disposal, however, is but 70 to 80 percent of that produced." In addition, sizeable quantities of other solid wastes -- commercial, trade, manufacturing refuse, demolition debris, and agricultural solids wastes -- often add to a community's disposal problem.

The reasons for public health concern with solid waste handling are well-known. They include: (1) production of flies and other insects, (2) attraction and harborage of rodents, (3) air pollution, (4) water pollution, (5) aesthetics, and (6) fire and accident hazards.

From the fly production aspect alone, refuse handling deserves careful consideration. The ability of flies to quickly find and oviposit on any suitable material, including garbage, is well known. The infestation of garbage in containers was studied in detail at Phoenix, Arizona, by Siverly and Schoof.(5) Surprisingly, they found that Phaenicia pallescens adults displayed the ability to enter garbage containers through openings as small as one-eight of an inch in diameter. In other studies, Siverly and Schoof(6) found that as many as 70,000 flies were produced per cubic foot of garbage exposed to ovipositing flies.

When flies infest garbage, the larvae are usually concealed in the garbage or in the lower part of the can so that ordinarily the householder is unaware of their presence. Although many of these larvae are carted away whenthe refuse is collected, studies have shown that during warm weather large numbers of larvae migrate from the cans before the refuse is collected. Campbell and Black(7), for example, found that an average of 1128 fly larvae per can per week migrated from thirty refuse cans to pupate before the combined refuse was collected at Concord, California. During the two years of study, a maximum count of 23,208 larvae was obtained from one can in a single week.

Evidence which justifies public health concern in the air pollution aspects of refuse disposal was recently found by Lewis, et al.(8) In their study, they investigated the source and nature of air contaminants which produce asthma in New Orleans. A statistically significant relationship was found between the daily asthma admissions at Charity Hospital emergency clinic and the prevalence of one air pollutant, a poor combustion particle associated with silica. All possible sources of this material were not examined; however, samples taken at a dump in the summer of 1961 revealed large quantities of this particle.

From an occupational health and accident prevention standpoint, solid waste handling presents formidable problems. Sliepcevich,(9) in a detailed study of the Department of Sanitation of New York City, found that arthritis, cardiovascular diseases, muscle and tendon diseases (particularly muscle ailments affecting the back), skin diseases, and hernia could all be classified as occupational diseases of refuse collectors. Sanitation workers were also found to have an extremely high injury frequency rate

(69.2 average injuries among New York City sanitationmen per million man-hours worked), exceeding that of all other occupations previously studied with the exception of logging. Sliepcevich also observed that "the rate was more than twice as high as that for firemen and policemen and surpasses even that of stevedores."

These statistics are even more startling when the methods used for selection of these men are considered. New York City sanitationman candidates must first pass a qualifying written examination, then a physical examination, and finally a series of tests to determine physical fitness. The physical fitness tests were compiled in 1939 by Professor Francis P. Wall, Head of the Physical Education Department, New York University, to determine endurance, agility, strength, and coordination. Donchin(10) reported that the tests consisted of a qualifying lift of a 120-pound weighted can to a 4-1/2 foot shelf, followed by (1) an 80-pound dumbell military press with each hand, (2) a 60-pound abdominal lift, (3) an agility test -- broad jump, hurdle, fence trap, and eight-foot wall to scale, (4) a 120-yard run against time with a 50-pound dumbell in each hand, plus (5) a coordination test in which the candidate operated a specially constructed mock-up of a sanitation truck.

Some indication of the rigorous selection made with such a testing procedure was given by Donchin(10) in the following records of a 1939 test: 85,000 men filed for the job; 72,094 took the written examination and 48,643 passed; 28,680 passed the medical examination; and the final list contained the names of the top 7,826 candidates of the 22,289 men who survived all phases of the examination.

Even a casual perusal of the technical literature indicates that all aspects of solid waste handling technology have received increased attention during recent years. This growing interest becomes clearly evident by comparing the number of items listed in the series of annotated bibliographies on refuse collection and disposal that have been prepared by the staff of the Division of Environmental Engineering and Food Protection. For example, the 1958-1955 bibliography(11) lists 358 items, while the 1960-1961 bibliography lists 627 items.

The technological base in this field is growing through contributions of the variety of professions involved. This increasing body of technical information should enable local governments to cope more effectively with their present solid waste handling problems and to plan better and more economical systems for the future.

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CONTROL OF ATMOSPHERIC CONTAMINANTS - Allen D. Brandt, Sc.D.

Since air pollution is one aspect of the environment, it is fitting and proper that it be on the agenda of any conference devoted to urban planning for environmental health.

When entering upon a discussion of this kind it is imperative that we get a better notion at the outset as to what is meant by the term "air pollution." This term has widely different connotations to different people. Air pollution to the man who lives next door to an abattoir is not the same as to the man living beside a dirt road in dry summer weather; it is not the same to the people living in Los Angeles today as to the people who lived in Pittsburgh or St. Louis several decades back; it is not the same to the man who lives in the vicinity of a sulphite paper mill as to one who lives near a dry-cleaning establishment; and we might go on and on. In other words, what constitutes "air pollution" in the opinion of one person may be, and often is, quite different from the condition that constitutes "air pollution" in the mind of another. What is more important, the condition is alleged to constitute air pollution very frequently does not constitute it in a legal sense. There is a great difference between the mere presence of contaminants in the air and a condition of air pollution. Even from the legal viewpoint, there is not complete agreement among the different definitions of air pollution, though there is a great deal of similarlity between them. A common and a meaningful definition is that contained in the Pennsylvania Air Pollution Control Act. It reads:

> "The presence in the outdoor atmosphere of one or more air contaminants in sufficient quantity and of such characteristics and duration which is injurious to human, plant, or animal life, or to property, or which unreasonably interferes with the comfortable enjoyment of life and property throughout the Commonwealth or throughout such areas of the Commonwealth as shall be affected thereby."

Inasmuch as there is a great deal of variation as to contaminants present in the air from one place to another, it is extremely important that this fact be borne in mind, because it frequently is the most important factor in deciding what should be done about air pollution, what can be done about it, and how far we should go with respect to control.

Let us consider for a moment the source of air contaminants. There are many, as I am sure you know. Numbered among them are industrial plants of many types; commercial operations such as bakeries, abattoirs, coffee roasters, dry cleaning establishments; modes of transportation such as automobiles, diesel trucks and locomotives, and airplanes; and there are many others, some of which will be mentioned later. Returning now to the automobile, it is well-known that it is a major source of air contaminants in the nature of the hydrocarbons discharged from the crankcase ventilating system and from the tailpipe. The automobile, however, is responsible for air contaminants of other types. For example, did it ever occur to you what happens to the rubber that is worn off of your tires, and for that matter to the road surface which slowly is worn away by automobile traffic. Needless to say, these materials find their way into the atmosphere in the form of particulate matter, i.e., dust. In addition, dirt of all kinds which collects on the surface of the highways and on the shoulders along such highways, and in the gutters of city streets, is resuspended repeatedly into the air by the turbulence of the air created as an automobile speeds along.

Some of the components of community life and operation also are sources of air contaminants. Take the private home, for example. People frequently burn their leaves; spray their roses, shrubs, etc.; use furnaces to heat the house, which furnaces discharge contaminants to the air; and have power lawn mowers which also discharge air contaminants. In addition, in many communities the public buildings such as the court house, the schools, the fire halls, the post offices and the like have heating plants which discharge contaminants to the air in the community.

The repair, construction and demolition industries are a source of air contaminants. Road repair or building, especially in dry weather, is a source of thick clouds of dust on occasion as we all know. These are whipped up by high winds and carried for substantial distances. Admittedly, such sources are periodic or cyclic in nature and might not constitute air pollution by legal definition, though they do give rise to complaints from people living or otherwise located nearby. Power plants are sources of air contaminants. While such plants which have adequate dust catchers are not an important source of air contaminants, if uncontrolled they discharge substantial amounts of particulate matter in the nature of flyash. In addition, all of them discharge sulfur dioxide which, fortunately, rarely is found in concentrations high enough to constitute air pollution by definition. Quarrying and open pit mining operations, likewise may be the source of clouds of dust depending on the nature of the operation.

Add to the foregoing the many natural sources such as decaying leaves and vegetation of all kinds, pollen from weeds and plants of all varieties, and dirt from barren areas which is whipped up by wind in dry weather. It is clear, then, that the type and varieties of air contaminants is almost unlimited and that not only every human being, but also the forces of nature are responsible for producing, releasing or discharging contaminants into the air.

So much for pollutants and their sources. The question is what approach should be used in meeting the problem. In other words, what is the procedure for all concerned, including those engaged in air pollution control work with the governmental agencies, to bring about an orderly solution to the air pollution problem, first defining or evaluating the problem and secondly achieving control.

There are several important steps in the proper conduct of an air pollution evaluation and control program in terms of the activities of the personnel employed by the governmental agencies, whether such agency be a city, a township, a county, a state, or the federal government. Obviously, the first, and a very important, step is to investigate the condition. Until the problem has been studied and defined, i.e., a determination made as to whether a condition of air pollution exists or not, it is illogical to attempt to control it. Not infrequently, such investigation will show that an air pollution problem does not actually exist. Secondly, if it be found that an air pollution problem does exist, the problem should be defined with sufficient precision to permit a concentrated and meaningful attack upon it. Only then can control be brought about with the minimum of inconvenience, hardship and cost to all concerned.

Making an adequate investigation frequently is a difficult and involved undertaking which requires considerable technical competence. For this reason it is important in the proper conduct of an air pollution control program that the lower levels of governmental agencies which cannot afford the qualified personnel and complex equipment needed turn to the next higher level of government for assistance. The definition of an air pollution problem, almost without exception, requires objective evidence. To obtain it requires time, competent personnel and adequate and expensive equipment. In addition to the actual investigation of contaminants in the air of the community or area in question, an inventory of the sources of air contaminants must be made. This also, requires knowledgeable personnel if meaningful results are to be obtained.

Assuming that a proper investigation has been made and a condition of air pollution has been found to exist, the next logical step is to consult with any and all people who can be of assistance. If the area in question is a small community, the state department having jurisdiction for air pollution control, usually the Health Department, should be consulted as well as knowledgeable persons in the community, especially those who are employed by the concerns which constitute some of the major sources of air contaminants. To be sure, there may be reluctance on the part of communities, cities and state regulatory agency personnel to consult with the "offenders," but experience has shown that very effective air pollution control usually is achieved over a period of time by such approach. What is more, such control is brought about in a spirit of mutual understanding and appreciation. If an air pollution control regulation or ordinance appears to be needed, an appropriate and meaningful one more likely will be drafted by the combined effort of a group of people with diverse interests than by any single governmental agency irrespective of how competent the personnel of that agency may be. No one is omniscient or clairvoyant, and only when all aspects of the problem are "thrown into the pot" and given adequate consideration will the best regulation or ordinance result.

As indicated previously, experience has shown that the cooperative approach is the best in the long run. The excellent relationship as between the different persons involved in a cooperative effort and the sincere cooperation resulting therefrom bring about a sincere and progressive effort on the part of essentially all offenders. The most important single factor which is responsible for the weaknesses found in many ordinances and regulations is that of communication. The cooperative approach improves communications, which in turn improve understanding of each other's problems, and it in turn results in a more effective control program. There is no substitute for teamwork in the matter of air pollution control, whether it be the drafting of the ordinance or regulation, or whether it be the actual administration of it in all of its many and varied aspects.

In this connection, it may be well to consider briefly the matter of laws, ordinances, regulations and the like. There are certain philosophies with respect thereto that must be borne in mind at all times by all concerned. One, as the audience may recall, was expressed at this morning's meeting by the Secretary, Department of Internal Affairs, Miss Blatt, namely, that the administration of the regulations or the enforcement thereof should be carried out by the lowest level of government capable of performing that function. Few people, of course, take exception to this very important basic concept in our democratic form of government. However, in the application of this philosophy, it must be remembered that small communities, including many cities, do not have competent personnel and appropriate equipment, or funds to employ personnel and purchase equipment, such as are needed to carry out a significant and fruitful evaluation of the air pollution situation in the area in question. As indicated previously, this makes it necessary for such communities to look to the next higher level of government for assistance in evaluating the problem and drafting appropriate regulations, if such are found to be needed.

It is imperative to bear in mind that air pollution is not a respecter of political boundaries whether they be township, city, county, state or even national. What is more, unlike water, air does not flow in the same direction at all times. Consequently, it usually is necessary to approach any air pollution problem on an air pollution-basin area concept. For example, in the Allentown-Bethlehem-Easton area, the problem needs to be considered, at the outset at least, on the basis of the entire area. These communities are so close together that in a study of the air pollution situation, it is imperative to include the entire area. In fact, included in this area should be that portion of the Lehigh Valley which contains the "cement belt." While it is not impossible that the study may show separate regulations or ordinances for the individual localities will be satisfactory, such is highly unlikely. In other words, Bethlehem and Allentown definitely, possibly including the cement belt and Easton, constitute an air pollution basin where the pollutants produced in any of these separate geographical areas affect one or more of the adjoining areas. Those of you who come from that area realize, I am sure, that the State Health Department currently is making an air pollution survey in the area. This is a long-time undertaking. After it has been completed, objective information will be available to make a determination as to (1) whether a problem or problems exists, (2) the nature of such problem if one is found to exist, and (3) the type of ordinance or regulation, if any, needed to achieve control.

Since, as pointed out previously, it is an important concept of government in a democratic society that any function of government be carried out at the lowest level of government capable of doing so, a word as to the place of the federal government in this matter appears to be in order. It is unfortunate that many of the people on the federal scene today, as regards air pollution control, apparently do not subscribe to this philosophy. The federal government, specifically the Public Health Service, has several very important responsibilities in the air pollution program of the nation. In the first place, so little definitive information is available as to the health effects of air pollution on the exposed populations that it is incumbent upon the federal government to increase the store of knowledge in this area as rapidly as is feasible. This is such a vast undertaking that only the federal government can do it effectively, and even then a long period of time will be required to reach firm answers.

In addition, of course, the Public Health Service must assume responsibility for all international problems of air pollution, as well as those interstate problems where adequate progress toward solutions is not being made because one or more of the states involved fails to participate or to cooperate. However, there is no place for activity of the federal government on intrastate or intercommunity air pollution activities within a state.

Pursuing this matter further with specific reference to Pennsylvania, it appears that relatively few urban areas other than Philadelphia and Pittsburgh are large enough to handle their own problems. Not being as well acquainted with certain areas of the state as I might be, I may be "short changing" such areas as the Scranton-Wilkes Barre combination, or, for that matter, Erie. However, I question whether many, if any, other urban areas in the state are large enough to support the cost involved in making their own evaluations of the air pollution problem. Consequently, with but very few exceptions, it appears that responsibility for the evaluation of the problem in practically all urban areas in Pennsylvania must come to rest on the doorstep of the State Health Department Division of Air Pollution Control. As a matter of fact, the Health Department already is engaged in several of such area investigations and has a list of others to be undertaken as soon as time, personnel and equipment become available.

A few words with respect to the air pollution control law, the Act of 1960, are in order. This Act now is about three years old. In my opinion it is a good law and takes into consideration many, if not all, of the points and considerations referred to previously. It is so written that the state will not usurp the authority belonging to any community against the wishes of such community, but at the same time it makes possible the assistance of the state Division of Air Pollution Control for any communities needing it. As you probably know, the law in Pennsylvania is essentially an enabling act which provides the mechanism for accomplishing air pollution control in the state. It establishes an eleven-man Commission. Five of the members of that Commission are the Secretaries of the Department of Health, Department of Commerce, Department of Labor and Industry, Department of Mines and Mineral Industries and Department of Agriculture, and six are appointive members chosen to represent different technical skills, disciplines, and other areas of interest, all six being specified rather carefully in the law. In addition, it provides for regional air pollution control associations, the number of regions and the area of each to be determined by the Commission. The law expressly excludes the counties of Allegheny and Philadelphia for the reason that those areas are capable of carrying out their own air pollution control programs, and as a matter of fact, have been doing so for some time.

The purpose of the regional air pollution control associations is to achieve solutions to complaints or problems on a local basis in a rather informal fashion without having them come before the Commission. The provision calling for the regional associations is further evidence that the drafters recognized the importance of having responsibility for air pollution control vested in the lower levels of government in the state insofar as feasible.

Even though certain of the Commission members must have technical qualifications as specified in the law, because of the complexities of air pollution and its control, the law provides also for a Council of Technical

Advisers to be appointed by the Commission for assistance of any kind on any problem which the Commission feels it is not competent to handle without outside help. This is a very important provision of the Act, because it makes it possible for the Commission to get competent help from any source, not only inside the state but also outside, on any difficult problem encountered by it.

Let us turn now to community ordinances. I must confess that Miss Blatt did a better job on this than I think I can do, because she apparently wrote the first one adopted by Pittsburgh. It was written in 1941 and anyone who had the experience of travelling to or through Pittsburgh during the decade between 1935 and 1945 is cognizant of the problem that existed in that area at that time. For example, I can recall driving into Pittsburgh on Route US 30 from the East on more than one occasion about 9 a.m. when it became necessary to turn on the automobile lights at about the Westinghouse Bridge even though it was not a cloudy day. While the ordinance in Pittsburgh was drafted in 1941, it was not enforced until 1945 because of the war. It was in the nature of a smoke ordinance, rather than an air pollution control ordinance, but it achieved remarkable success in a short time. The reason,. of course, is that much of the contamination of the atmosphere was in the nature of smoke from domestic furnaces fired with bituminous coal.

In 1949 the Pittsburgh ordinance was broadened in many respects and administration was transferred from the Inspection Bureau to the Health Department. The new regulation was drafted by a team of persons representing all areas of interest. According to reports, as early as 1955 there had been a 97% reduction in heavy smoke and a 88% reduction in total smoke in the city. About 1960, it became apparent that the smoke ordinance no longer was adequate and a new ordinance covering all types of air contaminants was drafted. This again was done by teams of representatives from all interests affected. While a great deal of progress has been made in this "Cinderella City," Pittsburgh still has a long way to go. However, it is headed in the right direction, and is making progress; the program is being pursued on a reasonable basis with a good timetable for the different stages of accomplishments. It is not a crash program; such programs usually achieve comparatively little in the way of results per dollar invested in equipment.

Contrast now the Pittsburgh situation with that in Los Angeles County. Admittedly, the Los Angeles problem was more difficult of definition than that of Pittsburgh. However, it is no secret that the Los Angeles regulations were written before the problem had been defined. As a result, the earlier ones missed their target rather completely. For example, after the sulfur dioxide levels in the county had been reduced about 50%, the eye irritation, rather than decreasing as had been expected, actually increased considerably. The Los Angeles problem even today has not been defined thoroughly. Nevertheless, there has been sufficient progress in that direction to permit putting the finger on the principal culprit, namely, the hydrocarbons from automobiles.

With respect to the enforcement of air pollution control ordinances and regulations, it seems to me that such regulatory instruments are more important from the viewpoint of defining the problem and setting the objectives than from the viewpoint of providing a club to force the offenders into line. Admittedly, there will be some few recalcitrant offenders who must be forced into line. However, there is little doubt that so long as a cooperative team approach is employed, the large percentage of offenders will make sincere efforts to control their emissions. Some few, regrettably, will have to be taken to court to bring about the control that is needed. The point I wish to emphasize, however, is that, in my opinion, ordinances and regulations if properly drawn are much more important from the viewpoint of establishing meaningful objectives and timetables than they are from the viewpoint of forcing the few recalcitrants into line.

It is extremely important in any air pollution control program that adequate time be given for the offenders to "bring their house in order." Air pollution control is exceptionally costly, especially for certain types of operations. What is more, the installation of large control units requires months and sometimes even more than a year to complete the work involved in selecting equipment, designing the system and the subsequent construction and installation. Pittsburgh serves as an excellent example to show that if adequate time is given for the program, excellent results will be achieved, and at the same time the relations between the representatives of the regulatory agencies and of the offenders will be amicable.

Since air pollution control installations of certain types are extremely expensive, it simply is unreasonable to expect that control can be achieved in a short period of time. For example, as some of you may know, providing air pollution control at a single open hearth furnace for the manufacture of steel today costs almost one million dollars. Consequently, controlling the effluent from a shop which may have more than 20 such furnaces is an expensive project which the management of a steel plant cannot undertake "at the drop of a hat." Such equipment, costly though it is, does not increase the production or the productive capacity of the plant. Therefore, the investment and the cost of operation is a total waste of funds in terms of improving the income of the plant. Obviously, then, it is only fair that adequate time be given for any industry that must spend such huge amounts of money on air pollution control to find and budget the funds necessary for the equipment installation and subsequent operation.

HOUSING - Michael P. Marcelli

While my talk this afternoon will be about housing in relation to its environment, it will be developed within the context of the Urban Renewal Program. Also, I wish to clarify two basic differences in my approach. One, I shall limit myself to the neighborhood - the previous speakers were largely concerned with the broader aspects of their subject and considered them on a city-wide or regional basis. Two, for the purposes of this discussion I shall consider housing as being affected by its environment rather than an influence on it. This is an important point since it suggests the fact that while people may attempt, on either a piecemeal or coordinated basis, to improve their lot insofar as housing is concerned, they have little or no control over other environmental deficiencies. The term "housing" then, will be used synonomously with the people who inhabit the structures, who are negatively affected by environmental problems, and who will be the beneficiaries of any environmental improvements.

There usually is no problem, in this regard, with new housing. All the modern conveniences are absolutely essential to the saleability of a new development and are therefore provided. It is hard to conceive of new neighborhoods which would lack the basic environmental necessities such as light and air, good streets with residential traffic loads, sewage disposal, adequate water supply, etc. While these neighborhoods may become future problems, for various reasons, they are not today's problems. Neither are the older neighborhoods which have managed to fend for themselves over the years and maintain their value through good maintenance habits and a continuing interest by the local government.

At the other end of the spectrum are the areas which were developed haphazardly, with homes of inadequate original construction on insufficient sites where, because of the Topsy-like growth, municipal services were also insufficient and inadequate. The structures are old and have not been well maintained - probably having changed hands several times to lesser economic groups during their lifetime. The net effect is a total area of such questionable value that only complete redevelopment will bring about any appreciable change. Such a program, of course, envisages total clearance. Deterioration and decay are too far advanced to attempt to bring about private investment into each individual property regardless of the incentives provided by the city to encourage such action. In other words, where the value of the neighborhood in terms of the physical improvements and community cohesiveness and vitality does not warrant municipal expenditures in environmental improvements -

which might bring about private rehabilitation - then, clearly, clearance and redevelopment are a sound course of action.

However, between the neighborhood requiring total clearance and the sound neighborhoods are many neighborhoods of varying degrees of physical deterioration and, by the same token, innumerable possibilities for the conservation of these areas. "Conservation" is not used here in its generic sense. Rather, I refer specifically to one of the two possible urban renewal treatments legislatively permissible under the Housing Act of 1949, as amended. I have alluded to the other already, clearance and redevelopment. The basic difference between the two is that conservation attempts to retain that which is salvable in a given area. It attempts to identify that which is vital as opposed to that which is contributing to the area's stagnation or downward course. By removing the negative factors - thereby providing the initial impetus for the renascence of the area in question - the program also provides for numerous other services to further promote individual action by the area's residents. It is, we feel, a much more substantial, enduring and rewarding kind of renewal and, as usually follows, much more difficult to achieve. It requires careful identification of areas which will respond to this treatment by pinpointing the problems early and finding solutions to these problems as soon as possible.

It is therefore my purpose today to tell you about this Conservation Program, in detail, so that you, whose basic concern is environmental health, will be able to make it a part of your vocabulary of possible courses of action in achieving your objectives. This is not without ulterior motive. At the same time we, the Urban Renewal Administration, also benefit. As I mentioned earlier, this is a difficult and complex program. Its success depends in a large amount on whether or not the community will support the program outlined for it. Actually, specific planning can only proceed after preliminary investigations have uncovered the basic needs and suggested possible solutions. Therefore, any additional insights into an area's problems which may be gained by bringing into play those city agencies or segments of the professional community who already possess valuable and necessary information about potential areas, increases the probability for success and permits more informative and well considered applications for our review. This also has the side effect of speeding up our review processes - an important consideration in "Conservation" where time is of the essence.

Which, then, is the right area for conservation treatment? Well there are many, many possibilities, all different in terms of quality of housing, type of housing, objectives of the program, cohesiveness of the neighborhood residents or the lack of it, neighborhood identity, design possibilities, environmental deficiencies, future use of the area and on and on.

For this group, however, there is one criterion for area selection about which I would like to be specific. This has to do with the proper relationship of public improvements as opposed to private improvements - it is essential that both are considered. It is unreasonable to believe that any neighborhood will invest in properties which have been slowly wasting away over the years, merely because the local government through its redevelopment authority asks them to do so. This request must be accomplished by a concommitant improvement of the environment which, in addition to providing the incentives for concerted action, also assures the increase in neighborhood values in an abstract sense - decent and safe place in which to live - as well as a real increase in property values. This increase in valuation will provide the pad between present and future value to permit greater improvements within the scope of economic feasibility.

A program which does not seek to eliminate those environmental problems plaguing the area can never hope to enlist neighborhood participation. The presence of these environmental problems is a necessary ingredient since all projects, in order to be eligible for Federal assistance under this program, must cite at least two such deficiencies, such as: overcrowding on the land, traffic congestion, incompatible mixed uses and conversions, adverse influences from smoke, noise and fumes, inadequate public utilities, or the absence of needed community facilities. It follows, then, that a worthwhile program must correct those conditions which are reflecting a detrimental influence. This we believe will be the initial action which will spark the chain reaction toward renewal.

Our experience has shown that such a situation is not theoretical, that is, to locate an area with environmental deficiencies which at the same time contains deteriorated structures all of which will respond to rehabilitation treatment. There is a project now, in the development stage, of post-World War II homes which lacked much in original construction, too small for the local needs plus other basic construction deficiencies. Also, the area suffered from inadequate sewage disposal and sorely needed new sidewalks and streets and curbing. Something must be done. To do nothing is merely to condemn this area for future demolition. However, under our program we can arrest the downward trend and make this a viable community again. The Federal government will pay three-fourths of the costs of the neededpublic improvements and other project costs while the local share may take the form of non-cash credits. That is, any eligible project improvement installed by the locality may be offered as payment against their share in lieu of cash. The amount of credit is limited generally by the degree of use by the project residents of the provided facility.

There are many other benefits, mostly financial and all designed to permit the local authority sufficient tools to do a complete job. You may ask, what does the Federal government require in order to be eligible for these benefits.

In the example described above, we asked for sufficient evidence to assure us that improvements to the project structures by the residents would be commensurate to and would warrant the expenditure of funds required to revitalize the area. In this case, most residents were willing to make substantial additions and improvements to their properties once they were assured that the city would do its part and that the liberal financial F. H. A. programs would be made available to them. Other areas might not envisage such ambitious improvements and still be no less a conservation effort. The guiding principle in any case should be that each segment of the community, both private and public, does its fair share.

A project already in execution, Washington Square East, in Philadelphia, dramatically demonstrates the importance of removing nuisance uses prior to expecting renewal action. The Dock Street Markets, a wholesale fruit and produce distribution center, was the major contributor to the depression which cloaked the one-time best and original residential section of the city. In Philadelphia there has always been a demand for center city homes and many of these were historically significant. Not until the removal of "Dock Street" with its early morning noises and traffic congestion, rodent infestation and structure dilapidation did this area begin to realize its latent potential. Now the Food Distribution Center is in an area where it has the needed space and parking to flourish and grow while Washington Square East is on its way to becoming a little bit of colonial intimacy in a modern metropolis.

The old but now desirable homes are being rehabilitated by their owners in accordance with the "Urban Renewal" plan and the city will participate by developing a series of pedestrian passageways and interconnected parklets to complete the plan. Upon the site of the old Dock Street establishments new town houses have been constructed and soon three high-rise apartment towers will be built. There is more to the program than I can describe here, but generally speaking, it had its beginning in a basic environmental improvement.

As you can realize by now, the program is a comprehensive one with many possible services and benefits available and the costs for these are eligible for Federal assistance. For those of you who may become involved in our program, I will list those professional services which may be brought to bear in the planning and execution of a conservation project as well as the public improvements and community facilities which are eligible non-cash grants-in-aid cash, that is, non-cash substitutes for the locality's share of the net project cost.

All the services and activities which are permitted in clearance projects are also eligible in conservation projects in addition to the following:

(1) staff or consultant services for carrying out or coordinating project activities; (2) staff or professional assistance to coordinate social services to serve the needs of project residents and to establish and maintain neighborhood organizations or to work with existing neighborhood organizations to develop their understanding of and participation in project activities; and (3) professional assistance to provide general guidance to property owners involving common problems involving finance, design of structures and legal matters. These services will assure the necessary talent to develop and execute a realistic and imaginative plan. Should this plan provide for the construction of any of the following environmental improvements, then their costs also may be included as gross project costs: new, additions, or alterations to public kindergarten, elementary, junior and senior high schools; district police and fire stations; branch libraries; streets; curbs; gutters; sidewalks; traffic lights; bridges; ramps or interchanges which serve the project area; overpasses and underpasses - vehicular or pedestrian; water distribution facilities plus such related items as booster pumps, loop closures and storage tanks; sanitary sewers and treatment plants; storm sewers and drainage structures; electric and gas distribution facilities; flood control; off street parking; and parks and playgrounds including the land, landscaping, walks, lighting and fixed benches - also parks and playgrounds serving residential areas may include fixed improvements such as playground equipment, comfort stations and softball diamonds.

As you can see, the program lacks very little. It is a good program in search of a good area in which to implement it. To find these areas and to develop realistic, meaningful programs requires the interest and cooperation of every city and state agency as well as every segment of the professional community. This means you.

THE PLANNING PROCESS - Norman E. Tucker

Irving D. Salzburg, a philosophical planner, is credited with making the statement that pups of unknown ancestry grow up to be dogs of undetermined size and shape. I am sure that you now agree that most of our communities are dogs of undetermined size and shape and that this situation of unplanned animal husbandry is applicable to city planning. Because of this lack of planning we have problems, the dogs are our communities. I don't know whether you classify your particular community as a dog or not, but let me say that in traveling over the United States there are very few communities in my estimation that are not dogs, because they were not planned properly for this day and age. This brings us around to the point that there must be a planning process that must be applied to these communities to prevent this thing from happening in the future.

We are now going to attack this problem. The Public Health Service has made an effort in this direction. We have not yet grown to the magnitude of having 701 funds that we can give you for the asking, or additional funds to help you build sewage disposal plants, or things of that nature. One of the first things one act said in creation of a planning commission was that it could accept federal funds as well as other funds. Apparently that is an important asset to have, but we have not yet grown to that point. We do have, I think, a planning process, and this process is applicable to anything. Whether dancing with a girl or seeking a wife, there is a planning process which we go through and this is what I would like to briefly discuss with you as a method to approach and attack the problem.

First you must consider what type of planning you are going to have. There are two types of planning that we must consider. The first type of planning is remedial, putting out these brush fires that you have heard mentioned. Obviously almost every community, if it is a dog, and I say most of them are, must first consider this remedial type of planning. You must then, in your individual locality or region, determine what things must be taken care of remedially and attack that particular planning problem which in the true sense is not really planning, but merely correcting. The second phase or type of planning is what we call preventive planning and this is where the planner is brought into being because in this type of planning we are looking forward to tomorrow, next year, ten years from now, and hope to cope with those problems that will undoubtedly exist.

But let's see what the steps of this planning process are. I say these steps are applicable to anything. We are now making it applicable as the modus operandi of attacking the problem of city planning as it relates to urban activities. First, we must consider the basic conditions. If you are going to select a wife, I say this is one of the first steps. You look over the basic conditions, and if this is a nice figure, blue eyed, blonde haired sort of girl - fine. You have the first step taken care of in a package. You must also do this with a community. But what does a planner look at and what does he see when he looks at the basic conditions of a community. Let's assume that you can get into a helicopter and fly 25,000 ft. straight up and look down upon your community and what would you see? We have categorized several types of communities. The first type, we choose to call it the starfish type growth. Here is a community that wants to stay together, a surface tension is causing it to remain as a cohesive mass. It's growing, so how does it grow? It grows slowly out along the major transportation routes. This is a good community. Industry is thinking about coming in. If this is the type community that exists, what does it tell us? It tells us, generally speaking, that politics are probably good, nobody wants to get out. They are all trying to stay close together. It could be basically mono-religious in background. It may have good tax structure and good schools. It may have been a lot of those things that make people want to stay together and remain as a community. There are very few of these communities left in the United States. If there were, we wouldn't have the dogs that I have mentioned before.

What are the other types of growth that we see? The next is the so-called cluster growth, or some people call it the hedge hopping, grasshopper type growth. This type of community immediately tells us that there is something wrong with the central city. It is decadent, in politics or actual physical structure. Maybe the tax base is no good. For some reason these people want to hop out of that poor city and settle out some place else, start their own set-up which they feel will be better. There are a number of possible reasons and a complete feasibility report of the community would be necessary to determine all of the factors. But if you look down on a community and you see these clusters from 1 to 3 miles out from an ordinary city of say 25,000 population, you can begin to suspect that there are things not quite right in the central city.

The next type is a new terminology to most of you, a spadial nodal growth. Here is a community of the cluster type which is growing out in a big node. There is a magnetic force in that direction or area that is drawing the people that way. Now maybe it is topographical in nature, maybe there is a lake there, or it is something like the Tucson-Phoenix complex, 150 or so miles apart. Growing out of Tucson toward the Phoenix metropolitan area there is a tremendous spadial node that is developing and you may have some of those here. This then would have to be taken into account as far as the planning of your growth of the community is concerned. These are the same conditions that we will attack the problem with, by realizing where the growth is going to be and what type of a community it is.

Then we have a metropolitan area which will be a combination of all three of these growth types. We take the metropolitan area, as you would do to Harrisburg, and sectionalize it and find out which section tends to be a cluster, which section has the spadial nodal growing toward Philadelphia or over toward Pittsburgh as the case may be, or which sections tend to remain in the starfish type growth. And this you can do. Sections of metropolitan areas have personalities the same as our smaller communities have. This is one of the things that the planner will study rather seriously in determining the basic conditions of a community. It will go a long way toward assisting you in attacking the problem if you determine why the community tends to grow in one of these basic patterns.

The next step in the planning process is the basic inventory. This is where I allude to the Environmental Health Planning Guide, because it is the utilization of the Guide that will help you determine the basic inventories of your community. This is one of the things that we do in the courses that we put on throughout the country. There are also examples of environmental health surveys that have been conducted by communities with the initiative to analyze their own environmental health problems. The environmental health surveys are utilized for determining the basic inventories of the community. How else can you plan for the future unless you know how much remedial planning must be taken care of now before you go into preventive planning? This environmental Health Planning Guide is basically nothing more than a series of questions that can be asked in any community regarding the various subject items that it covers: health agency operation,, planning agencies, air pollution, housing, radiological health, refuse collection and disposal, sanitation programs, sewage service, and water supply service. Those are the things that you inventory as a second step in a planning process.

The question always comes up, "Do you have to have technical know how?" No. In Fort Wayne, Indiana, an outstanding survey was done by a group of ladies representing the League of Women Voters and other organizations. In Lake County, north of Chicago, Illinois a survey was conducted in joint cooperation between the Lake County Planning Department and the Lake County Health Department. The Guide is the tool that the Public Health Service will supply to you, your health department, your planning department, your civic organizations, to whomever is interested in determining the basic inventories of your community.

The third step of the planning process is to determine the basic goals of a community. The Harrisburg area may grow to the tune of another 60,000 people in the next 15 or 20 years. Therefore, this is not a problem. This does not have to be ferreted out and determined, but in some communities the basic goals of the community are highly important because if the community does not want to grow as planned and do the things that it should to prevent these problems, you are not going to get to first base, particularly if the politicians don't want to do it.

Then we go on to the next step which is the business of plan preparation. Here is where you must bring in the technical proficiency. Here is where only 6% of the 10,000 to 25,000 population cities have full time planning directors, and here is where we would like to stress again and again and again the necessity of getting into planning as soon as possible, even though you feel you can't afford it. The obvious answer is that you can't afford not to have plans prepared.

Now, let's talk about the final item in this process and that is plan implementation. I would like to combine plan implementation with a little different nomenclature, the success of the plan. What are the elements of a successful plan implementation? Well, the first of the elements of a successful plan implementation is local government cooperation and that is why in all of these conferences we actually plead, we beg, to get the commissioners, the councilmen, the mayor, the city manager, and other officials to attend these programs. Unfortunately, they are all busy people. Some of them are serving for nothing or at least for nominal fees and it is hard to get them to leave their businesses to come to this sort of thing. But, without local government cooperation, you are dead. This is one of the things that necessitates good civic organization, groups such as this, committees, and what not, to forever keep jogging, pròdding, and pushing for that type of cooperation we must have.

The second item is inter-governmental cooperation, and by that I mean between city and city, between city and county, between county and county, between state and city, between state and county, between state and state and between regions. You've got to have inter-governmental cooperation to get a regional plan in effect. There are not many areas where this regional concept has taken hold.

Finally, and probably the most important thing of all which will force these other things, is the individual enthusiasm of the citizens themselves. With individual enthusiasm such as this group is showing today, we can begin to pull together and work up to a successful planning process to attack a problem of environmental health be it in Harrisburg, Ashtabula, or Timbuctoo.

I would like to approach this as an engineer might approach it. We have looked at the planning process now as the planner may look at it. Not too long ago I had the privilege of attending the American Society of Civil

Engineers meeting in Atlanta, Georgia. Dr. Holcomb was one of the leaders in that particular meeting and gave an inspiring talk, and in that particular talk he said this new concept of systems analysis was a means of approaching environmental health - they call it environmental engineering, because being engineers they must use that word. One of the outstanding comments that came out of that particular discussion, to me at least, was a comment made by a rather notorious engineer, perhaps he was prejudiced a little bit, "Planning is much too important to be left to planners alone." I agree with him because being interested not only in the planning aspects but in the health aspects, I feel now that it is a cooperative job and must bring all of us together to plan. The planner is merely one segment in plan preparation and this is where he comes into being.

Let's assume that we are now a community in 1965 and I have it depicted in red because we are having problems. There is lots of remedial planning that needs to be done, but we want a green, widespread, beautifully planned community in say the year 1980 or whatever year you may choose that you are planning for. We want to eliminate all the smoke belching out from the smokestacks which causes air pollution and all that sort of thing. I depict a beautiful, green, expanded community that will require certain steps in a given period of time. Now we are going to be engineers and use a system analysis. At one time I used to be a professor of engineering and I recall teaching a subject known as "Vector analysis." This is not a vector like the rats, mosquitoes and flies that spread disease from one source to another for this is what the health people call a vector. The vector that I am talking about is a graphic representation in the form of an arrow showing the direction and magnitude of force. So let's say we are engineers and we are going to put the year 1960 here and we are going up to the year 1980 and we are going to have to have some vertical force which here I measure in CP units. We will talk more about what CP is in just a moment, but obviously it's going to be a force. So we will say that we are going to go from the bottom to the top in this particular graph. If you remember your vector analysis, to achieve this objective, you have a resultant vector.

So we know that in any community that is going to go from bottom to top, there are going to be all sorts of forces both small and large, vectors that will be going in all directions, some healthy, some diabolically opposite, and some that will be listless, doing nothing. These you take inventory of in finding the basic conditions of the planning process, find out who and what they are. Find out what these vectors are and how you can get them in concord because all of these things have got to be put in an orderly fashion to achieve this resultant community that we are trying to obtain. There are some major vectors which I have mentioned previously that we must take into account and we must swing in our direction if we are going to get this result. Some of these vectors emanate from a place called city hall or the county courthouse. Emanating from city hall we have a major vector which we call the politician. Now he may be helping this resultant vector by pushing up and toward the goal that you want to achieve or he may possibly be against it. We must make the analysis of what these politicians are doing. Having been a city manager, I used this argument myself when women came in and said, "Well, we want to get a certain thing done" and we replied, "We don't have the money to do it." So also coming out of city hall is this business of the economics of a community, a vital vector in achieving our goal. I maybe should use a little shorter vector than politicians because the politicians still control the money by voting certain resolutions on how to spend it. So we have these two vectors then and I will let them hang listlessly down for the moment because I don't know what they are here in Harrisburg.

Who controls city hall? Well, fortunately we have an umbilical cord here, known as democracy and I like it even though it makes things complicated as far as the governmental maze is concerned. This particular part connects citizens out in the city with city hall by this democratic process. We may have to wait two or four years to vote the son-of-a-gun out, but sooner or later if we can get to him and get the right people in there to do the job we want. Then we have the citizens running helter skelter, they may be some of these little vectors going all directions, there are little organizations beginning to form. In Fort Wayne we had 76 citizen organizations and they finally realized that, as Franklin said, "operating individually they can be broken rather quickly." But, when they all got together they formed a pretty strong bundle and that is exactly what happens when you take all these citizens and put them together, we have this CP or citizen's power - 100%. Now, if we can get all of this citizen power working together they become the most important vector of any community and they can sway over to here and hit the politicians, they can hit the economics so that they vote the bond issues and they can begin to force vectors of the politicians over to help us achieve this particular objective or resultant of a better community.

But who is going to force the citizen power to act if they tend to hang listlessly and if they tend not to do the job as we feel that they should? There are two agencies or two other vectors and this is where we call upon the planners and the health department to work together in any community to educate, to bring citizen power to bear with the democratic process, to hit the politicians, to provide the economics, to obtain the resultants that we want, to have it in the form of this more wonderful place to live by the year 1980. This then might be an engineer's approach to the planning process, an engineer's reaction to how he could make a systems analysis realizing that each one of these vectors that we show here is an individual system. That system must be isolated as you would isolate a virus germ, put it in a test tube, find out what makes it tick and then enlist the power of that vector to assist you in obtaining the resultant vector. There are three major vectors, the politicians, the economic condition of the community, and the citizen power that basically will control all of these vectors.

I have rapidly gone through what I feel to be the method of attacking the problem. It can only be done by the individual enthusiasm of the citizens because if the citizens are against it, you are not going to get the job accomplished. Now we in the Public Health Service have been fortunate in working with a number of communities with different approaches to the inventory and the attacking of the problem in its relation to environmental health. The most recent was in Merced, California, which was completed February 9. This was one of our two-week schools that we put on periodically. The next one is scheduled for Lexington, Kentucky (April 1963).

In Merced, California, we conducted the survey as a class exercise for a one-week school. This was just a means of conducting the survey. Remember, a citizen group, a specially appointed advisory group, a health committee group, a planning group, any group can take the Environmental Health Planning Guide and conduct its own inventory or survey because it's just that simple. It's so simple that I did four of them myself and if it's that simple, any of you sitting in this audience can do it individually and certainly collectively. We suggested an implementation program and fortunately for us during the conduct of this course, we had good publicity and we had a strong representation of local people. We have now the modus operandi for a tremendous implementation program on environmental health in Merced. It can be done. It is being done not only in Merced, but Boulder, Colorado, where I am scheduled to be for an implementation meeting resulting from an environmental health survey which showed where they need state legislation and where they are now getting state legislation drawn up and submitted. A little community of about 35, 000 people is now leading the state of Colorado in getting state legislation that will help them in environmental health. Well we go on ad infinitum to Denver where we put on conferences, Kansas City where we put on a conference, Saratoga Springs, N. Y., etc. I can go on and name all of the places where we put on 1, 2, and 3 day conferences and have stimulated interest such as we hope for here in order to get the community to become more aware of the environmental health problem. All we are trying to do is to stimulate you to want to make Pennsylvania a better place in which to live, work, play and worship. Thank you.

HEALTH DEPARTMENTS - Albert L. Chapman, M.D.

INTRODUCTION

The world of 1963 is not the world of 1945 nor will the world of 1975 be the world of 1963. Many dramatic changes will occur during the next decade -- changes that will affect all of us no matter where we live or what agency we work for. If, in the midst of these turbulent changes, order is to prevail, planning is indicated at all levels of government, in every state and in every growing community.

Carved on the granite front of an ornate government building in Washington are those famous words "What is past is prologue." Perhaps a glimpse at the past decade can give us a clue concerning the magnitude and nature of the changes that face planners today.

CHANGES

A. Population

From 1945 to 1962 the number of children born each year rose from 2 million to 4 million. Coincidentally the total population jumped from 140 to 186 million. By 1975, it is estimated, the total population will be in the neighborhood of 234 million.

B. The Dollar

At the end of World War II the value of the dollar was 30 percent higher than it is today. Since then the earning power of the American people has more than doubled. As a result there is more money to be spent than ever before.

It is predicted that this trend will continue through 1975. In other words, MONEY WILL BE in plentiful supply for a long time to come. The competition for these dollars will insure the continuation of new product development which is at once a blessing and a curse.

C. Population Movement

For several decades the movement from farms to cities has been accelerating. This movement will continue during the foreseeable future. Another 1,500,000 farms will be abandoned by 1975.

D. The Scientific Revolution

Industry is spending unprecedented amounts of money on research to develop new materials, new techniques, new instruments and new equipment. Never has the pace of industrial change been so rapid. This pace not only will continue -- it will be accelerated.

E. Housing

Twenty million new homes will be built before 1975. This compares favorably with the 13 million new homes built since World War II.

F. Personal Debts

Most of the products of the scientific and technologic revolution are being bought "on-the-cuff." In 1945 the American people owed 5 1/2 billion dollars. Today they owe 57 billion. It is not hard to estimate what will be owed in 1975. This will affect the ability of people to pay for many otherwise desirable community facilities and services.

G. Merchandising

Stores are changing rapidly in size and character. For one thing they are larger - often consolidated as chains - and more and more frequently they are being built in shopping centers on the fringes of the central city.

H. Schools

School enrollments have increased from 23 to 39 million over the past 15 years. Because of this the number of youngsters who will be eligible for college by 1975 will be double the number that are eligible today.

I. Highways

By 1975, 110 million cars will be registered. This means that the present interstate road building program, due for completion in 1972, will be inadequate before the last concrete is poured. Unless urban planners work miracles all of us can look forward to the dismal prospect of bumper to bumper traffic and a further increase in traffic deaths within 10 years.

J. Water

The present per capita consumption of water will rise from 147 gallons a day to 185 gallons or more. Many cities already are threatened with water shortages. Where will the needed water come from?

K. Sewers

The Public Health Service estimates that half the community sewerage facilities in the United States already are inadequate. Can urban planners cope with the anticipated increase of 30% more people who will require new sewerage facilities?

THE CHALLENGE

These unprecedented changes in the vital structure of everyday life have brought about changes which challenge the foresight, the wisdom, and the talent of everyone who has a contribution to make to the planning process.

Can plans be developed at the federal, state, and local level that will insure the proper use of the end products of scientific achievement?

Can the demand be met for new homes, hospitals, schools and roads that has been placed on urban planners by the exploding population?

Can the sewage, garbage, water supply, and other facilities and services needed to serve this large population be developed in time to prevent some of the dislocations that have plagued growing communities in the past?

Will air pollution get out of hand?

Can adequate housing be provided? Can existing housing be improved?

These are some of the challenges facing you.

THE REVOLUTION IN HEALTH

Public health departments are also adjusting to their own revolution. The financing of health research has reached astronomical proportions. At the end of World War II federal support for medical research was at the ten million dollar level. Today the research budget has reached the 3/4 billion dollar mark.

This investment in research has paid big dividends. Life expectancy has been steadily extended; some diseases such as malaria, typhoid fever, and smallpox have been virtually eliminated; many other diseases have been brought under substantial control; many persons disabled by injuries or disease are now being rehabilitated.

These miracles of modern medicine have had a noticeable impact on many community institutions. The problem of aging has been accentuated. The demand for nursing homes, for beds for the chronically ill, and for rehabilitation facilities has grown. General hospitals have taken on more of the aspects of diagnostic and maternity centers. Physicians more frequently treat patients in their office or in hospitals. Tuberculosis hospitals, faced with a declining bed population, are being closed or, according to plan, are being transformed into institutions for the care of the chronically ill and aged.

During these years of rapid improvement in the healing arts, there have been similar improvements in sanitary science and preventive medicine. Sewage and garbage disposal methods have been simplified and made more efficient. The purification of water has reached very high standards of performance. Foodborne epidemics have become much less frequent as food is better prepared, and more satisfactorily refrigerated. Immunization procedures have greatly reduced the toll once taken by the acute communicable diseases.

As a result, health departments now have more time to become interested in planning ahead in anticipation of the environmental changes that are taking place so rapidly. And health departments will, in the future, have on their staffs a much better trained group of professional persons covering a much broader spectrum of skills.

WHAT CAN THE HEALTH DEPARTMENT DO TO HELP?

There are two aspects to urban planning. One is planning for facilities. The other is planning for services. The proper consideration of both of these aspects by planners is essential. The state and some full-time local health departments are well qualified to give substantial assistance in planning for many types of facilities based on projections of services that the public will demand and will be willing to finance.

In the State Health Department, the Bureau of Environmental Health operates through five major divisions which represent a cross-section of needed health facilities and services. These are the divisions of Sanitation, Occupational Health, Environmental Safety, Sanitary Engineering, and Air Pollution Control. In addition, personnel have been assigned to each of the seven regional offices of the State Health Department where they are more immediately available to local communities.

The regulatory aspects of the Bureau's work is fairly well-known since these types of activities are more frequently publicized. However, less is known about the Bureau's consultants who provide advisory service and conduct surveys throughout the state. These surveys range from the evaluation of insect and rodent control problems to a determination of more effective ways of collecting and disposing of garbage: from surveys of restaurants to studies of water supply and sewage disposal facilities; from the identification of industrial waste problems to surveys of noise levels in industry; and from the evaluation of poor housing conditions to the abatement of air pollution.

Of particular value in urban planning is advance knowledge of the environmental capabilities of the soil and terrain to handle the sewage from homes and business establishments in new urban and suburban real estate developments. One of the most common problems encountered by many communities is a by-product of lack of planning for the proper disposal of human wastes in these mushrooming suburban developments.

The common image of an environmental health staff is one of engineers and sanitarians going about the state with a big stick enforcing state and local laws and ordinances. This is a very distorted image. Actually advice and consultation, call it education if you will, is the primary commodity offered to the public by the State Health Department. Regulation and enforcement is only a by-product.

Another distortion is the idea that only engineers and sanitarians staff the Bureau of Environmental Health. In reality the roster of specialists employed by the Bureau is quite impressive. On this roster may be found chemists, nurses, physicians, dentists, and a number of specialists in air pollution, industrial hygiene, and water pollution. All are available for urban planning.

Equally impressive is the number of community surveys that have been conducted in cooperation with local officials throughout the state. These surveys have made a real contribution to an improvement in housing, sanitation, safety, location of schools, and water supply and sewage disposal systems.

The State Health Department also has access to one of the most comprehensive sets of vital statistics available anywhere in the state. These data can be very helpful to community planners. In projecting the need for future services in growing communities, other Bureaus and Divisions of the State Health Department plus their Regional Office staffs can also be very helpful in planning for additional hospital services, clinic services, safer housing, immunization programs, and even suitably located and designed recreational facilities.

WHAT ABOUT TOMORROW?

The increasing diversification of public health gives assurance that urban planners can count on increasing support from Health Departments in the years ahead.

For example, Pennsylvania is one of the few states in which behavioral scientists are employed by the State Health Department. Behavioral scientists have been employed in increasing numbers by industries that realize that people are not machines. People are individuals who insist on retaining the power to decide just what they will eat, where they will live, what type of clothes they will wear, which anti-acid they will take after meals, and whether or not they will pay the taxes needed to make needed civic improvements. Behavioral scientists can do an equally effective job in analyzing the reaction of people to health problems or to problems with which urban planners must cope.

In response to the challenge of aging and chronic illness the State Health Department and State Welfare Department are becoming much more competent in evaluaing the need for hospitals, nursing homes, rehabilitation facilities, and other resources of a similar type. Certainly no urban plan would be complete that did not recognize the need for making special provisions for older people.

Safety is another area of concern to modern health departments. Although health departments have been most active in the field of home safety, more and more interest is being shown in the medical and health problems of drivers. Certainly the capabilities of drivers and pedestrians should be taken into account in planning highway systems of the future. Deaths and disabilities from accidents offer the same challenge to health departments as deaths and disabilities caused by disease. Where else than inthe health department will a combination of environmental and medical resources be found that can be more helpful to persons planning the highway system of the future?

The health problems association with sub-standard housing will continue to be the subject of such research during the next 10 years. From this research will come data of value to urban planners. How can homes be fire proofed so that hundreds of Pennsylvanians will not be burned to death each year? What can better heating, lighting, and ventilation do to make homes more healthful places in which to live? What associations exist between sub-standard housing, juvenile delinquency and poor mental health? Would it be cheaper in the long run to provide more healthful housing and thereby lessen the burdens now placed on the courts and mental hospitals?

Until recently few people related recreation and health. However, there are many ways in which the existence of safe and attractive public recreational facilities can improve health. In some ways they may even compensate, in part at least, for poor housing. Moderate outdoor exercise is now recognized as conducive to better general and emotional health. In planning communities in the future the provision of adequate and safe recreational facilities may well deserve as much attention as the provision of good sewerage systems.

Unless a miracle happens and nations finally learn to live peacefully together the danger of atomic fallout will continue to plague us for many years to come. Because of the emergence of this threat during the past 10 years many state health departments are developing competency in dealing with various aspects of civilian defense. The Pennsylvania State Health Department is now engaged in radiation surveillance. It also is cooperating in civilian defense planning. Urban planners, who must face up to this threat and provide public fallout protection, can obtain substantial help from the state health department.

Finally there are many health problems that stem from industrial practices. In a state like Pennsylvania where industrial growth is being earnestly supported, many serious health problems will be created as a natural by-product of industrial development. Many of these problems can be anticipated and their ill effects minimized by sound planning. Certainly the engineering and medical competency in occupational health that exists in the state health department can be put to use by urban planners.

The formalization of planning as a discrete activity of health departments is a relatively new development. For this reason, many public health workers have not given much thought to the contribution they could make to groups involved in urban planning. Conversely it is probably true that urban planners have not given the health needs of people as high a priority in their planning as they have given to such things as physical comfort (traffic flow), to industrial development, or to residential zoning.

Yet, what could contribute more to the attractiveness of a community as a place to live or a place in which to establish a new industry than a high level of personal health? It is to be hoped, then, that in the future urban planners will invite public health workers to meet with them more frequently. If this serves no other purpose than to encourage public health workers to take their planning responsibilities more seriously it would be well worth the effort.

On the other hand, many sound suggestions might well be made that could result in the better provision of services for the aged and chronically ill, for safe, health supporting recreational facilities, for safe as well as efficient traffic flow, and for many other modifications of traditional plans which, at little extra cost, could pay health dividends.

SUMMARY

The remarkable changes in American way of life that have been brought about through industrial, military, and health research, will bring great and lasting benefits to Pennsylvania residents, but they will also magnify the problems facing urban planners.

Planning is of such great importance to the intelligent, safe, and healthful development of urban communities that the needs of urban planners should be given a high priority by all state and community agencies, including health departments.

Today, health departments have many competencies that could be useful to urban planners. Tomorrow these competencies will be multiplied. May I suggest that the time is ripe for urban planners and public health workers to get better acquainted.

LOCAL AGENCIES - Richard T. West

Many environmental health problems can be attacked through efforts of local agencies, such as the local planning commission and municipal authorities. There are several means available to aid in this attack. The local agency should utilize community education programs to teach citizens the importance of environmental health. The citizen should also be given an increased knowledge of his own community. A third area of attack is to coordinate community activities, public and private, in the application of this knowledge to the problem.

As a case study, look at West Manchester. Here it was found that poor soils mean poor subdivisions, vacant houses, and loss of value. It was too late to solve the problem except by means of public sewers, which made the development more costly because of lack of planning. Availability of the proper soil is a major factor in site location.

In the Spring Grove area they found it best to get the facts before development occurs. Soil information is the key to planning for safe and healthful living for future generations.

Given the facts, local officials and private developers can avoid many environmental health problems. Providing the basic information needed by these local people to make the right move is, as a practical matter, the responsibility of federal, state, and county officials. Local officials generally do not have the technical knowledge and resources needed to get these facts.

The experience in York County of cooperation between all of these levels of government has shown this can be done. (See the "York County Sanitation Project").

ELECTED OFFICIALS - R. Dewey Shaak, D.C.

During the forenoon of July 17, 1958, when the Public Health Service representative, Mr. Eldon P. Savage, came to Lebanon, Pennsylvania, to co-ordinate a two-year environmental health project, city and county officials turned out to welcome him. This was the beginning of an overall program of planned progress of a two-year pilot project designed to expose specific unsanitary conditions and spell out just what can be done about them.

It turned out that the project served as a demonstration to other cities and counties to the extent, so I'm told that 42 projects throughout the state have been started as a result of our survey made in Lebanon County. This was actually a joint effort by the Communicable Disease Center of the Public Health Service, the Pennsylvania State Health Department, and local city and county government officials.

Lebanon was selected because of the willingness of it's leaders to admit that a need existed. The two-year study cost around $50,000 with the city and county sharing $10,000 annually on a 50-50 basis and the government picking up the rest of the tab. As a result of the studies of vectors, which I learned are flies, mosquitos, bats, and rats, a complete house to house survey was made in the city to locate deficiencies in sanitation such as refuse and sewage disposal, as well as mosquitos, flies, and rats. In the county, sample surveys were made of 228 homes. During the time this was done, a citizen's committee was formed to serve as a steering committee. This committee represented various government and community organizations, and did a good job promoting community participation and public relations as well as helping to work out plans of correction of the deficiencies. This resulted in a need for both city and county legislation to implement its program. The committee worked with the planning commission and the Chamber of Commerce as well as political sub-divisions in planning urban renewal.

As a result of team work, many projects have been undertaken and some of them are completed, such as a $3,000,000 Lebanon metropolitan area sewage treatment plant which went into operation a few weeks ago and is capable of serving a population of 55,00 people. Surrounding boroughs and townships have been invited to take advantage of this modern plant at a great savings to them. Sewage feasibility studies have been completed in Cleona

Borough, South Lebanon Township, North Lebanon Township, West Lebanon Township, and Myerstown Borough, which is now in the process of putting in sewage treatment.

The Lebanon County Home and Hospital were connected to the city sewer, thus eliminating a messy and unsanitary situation in that its disposal plant was designed to take care of a maximum load of 100 people. The plant was trying to serve about 240 people with the result that the chlorinator seldom chlorinated, and when there was any water in Quittipahilla Creek, that is where it went. When the creek was dry, which was often the case, then this "stuff" made efforts to get to the creek. Let's just say it did the best it could. We also had a stone quarry on the County Home Farm which was often used as a dump, in spite of the "No Trespassing" signs and any other efforts we could make to prevent dumping. This quarry is in the process of being filled in and should be completed by next year. There has been no recent dumping.

Because of the fact that we were operating a farm in conjunction with our County Home and Hospital, droves of flies accumulated in the pig, ox, and cow stables. In spite of spraying and whatever other precautions we could take to prevent it, these flies often found their way to the kitchen and dining room tables as well as the patients' beds where they tormented our senior citizens who were confined there. This again called for spraying which sometimes killed a few flies, but surely wasn't exactly the type therapy prescribed by our doctor to treat our old folks. So we quit farming, sold out lock, stock, and barrel. We leased the land to a neighboring farmer who now runs the farm and keeps the weeds under control. The buildings were torn down, and even though we had hired an exterminator by the year, it seemed that the rats had become healthier. At least with the buildings removed, we had a face to face chance with the rats, and the rats came out second best. When one little building, formerly used as a cobbler shop, about 6 feet square in dimension, was torn down, 168 rats suddenly had heart failure -- after being hit over the head with a club, they just dropped dead. It seems that regardless of all we did, we still have some flies and rats around, partly due to our terribly antiquated County Home and Hospital.

County Commissioners of Lebanon County have now initiated a construction program for a new 240 bed County Home and Hospital to start as soon as possible -- and I mean this year. Right here let me say that I hope and pray that from somewhere, somehow, someone will come up with a suitable name for the institution we are planning. Let's get away from this alms house, poor house, County Home taint. Let's give our senior citizens the dignity they deserve.

There was a $2,000,000 improvement and expansion program to our Good Samaritan Hospital; the Borough of Myerstown completed a half million dollar improvement and expansion project to their water supply; public water lines have been extended in Palymra Borough; and the City of Lebanon has completed a million dollar water improvement plan including physical improvements to the existing reservoir and extension of water lines to subdivisions adjacent to the city.

Other items include an anti-rodent ordinance in the city, urban renewal, and re-development work which is now in progress removing blighted and deteriorated buildings in the city to provide for new buildings and parking facilities. The city purchased a sub-standard area known as "Little Hollywood" which they expect to re-develop. Arrangements are being made to fill in certain portions of the old historic Union Canal which are considered to be mosquito breeding sources. The City of Lebanon passed a restaurant ordinance patterned after the Pennsylvania Department of Health Public Eating and Drinking Establishments Standards. The county established a Refuse Authority operating a landfill for the entire county thus eliminating all public and quarry dumps, of which there were 26. At the present time, 82,000 out of our 93,000 residents are benefiting from this landfill service. By the same token, through community effort, we have accomplished other community improvements such as construction of a three and a half million dollar municipal building housing the Court House, City Hall, County Superintendent of Schools, Agricultural Extension and Home Economics offices, U.S. Public Health Service, Pennsylvania Department of Health Lebanon County office, City Health office, Federal Soil and Water Conservation, Civil Defense, County Jail, Sheriff's living quarters, as well as all other county and city offices including the City Police Department.

Through community effort and lots of hard work on the part of some of our prominent citizens, Lebanon County and City built our new Treadway Hotel-Motel. This was financed through the sale of stocks and bonds sold by and to our local residents. We are very proud of our hotel and municipal building.

Through much effort on the part of the County Commissioners and many others, Lebanon County received a new National Guard Armory. The old Armory building was then turned over to the mentally and physically handicapped and retarded for a workshop. A drive to raise $60,000 which was needed for renovation and necessary repairs was put on, and the Lebanon County workship for Physically Handicapped and Retarded moved in and are now in very successful operation.

A new federal building and post office is now under construction and will occupy the entire quarter block situated on the southwest corner of Eighth and Chestnut Streets. As a result of planning, working together, and team work, the residents of Lebanon County have put forth great efforts with a creditable amount of financial expenditure in bringing about a significant environmental sanitation and expansion improvement program.

As a result of this improvement program, we were asked to participate in a Communicable Disease Control Demonstration Project, an outgrowth of the Vector Control Program. Therefore, Lebanon City and County are presently cooperating with the Pennsylvania State Health Department and Communicable Disease Center of the U.S. Public Health Service in this extended program to control Communicable Diseases in the County.

I feel most certain that continuing emphasis on this and other community improvements will improve the health of our citizens and certainly enhance the objectives of our slogan known as "Lebanon City and County, The Valley of Planned Progress."

CIVIC GROUPS - Mrs. H. Everett Sanford

What do civic groups do to alleviate health problems to increase the general health of the people in their communities? What can they do? What should they be expected to do?

The Federation of Women's Clubs is the group about which I am best versed. The General Federation of Women's Clubs, organized in 1890, is the largest group of organized women in the world, with clubs in 53 countries and a membership of over 11 million women.

In Pennsylvania, which boasts a larger membership than any other state, we have almost 80,000 federated clubwomen in over 900 clubs. These clubs are little clubs and big clubs. The largest has 958 members and the smallest has a membership of 12. They are located in large cities and in suburban and rural areas.

The cartoonist's picture of the clubwoman eating cake, playing bridge, and talking about things of which she has little or no knowledge, is a thing of the past. True, I expect some clubwomen eat some cake and upon occasion some bridge may be played. They are not the important things in a clubwoman's life, and I think one would go far to find a group of better informed women than are found in a federated woman's club. Education of their own members was the original purpose of the G.F.W.C., and, while the corollary of service, including health, was soon added, education retains an important place. "To be completely and thoroughly informed on current affairs" is one of the purposes clubwomen have adopted for themselves. Study groups have become an important part of club life. In the G.F.W.C. there are six departments, -- Conservation, Education, Fine Arts, Home Life, International Affairs, and Public Affairs. All the work of the Federation is done within the framework of these six departments. This work has long since reached the big business stage as well over a half million dollars passed through the hands of Pennsylvania clubwomen in the last administration. Each department is divided into divisions. The Division of Health is in the Public Affairs Department, but problems affecting health are found in the Conservation Department, in the Department of Education, and certainly in Home Life. There are no hard and fast barriers.

As a rule, groups come to us for help. On June 30th, Mrs. Dexter Otis Arnold, General Federation President, met with all state presidents in Washington, D.C. During that day, 34 people representing causes that wanted to give something to -- or get something from -- the G. F. W. C., presented their "wares." Many, many of them were health agencies. All were given opportunity to be heard, all had opportunity to give and to send literature. Of course, it is understood that not all clubs will do everything. A supermarket of activities, all worthwhile, is presented. Each club or county chooses the activities which, to it, are most important, most appealing.

Work for retarded children is another favorite field. In Allegheny County a few administrations ago, this was the county project and never did a project meet with greater success! All kinds of school equipment were purchased: big stuffed dolls with which to teach children to dress and undress themselves; jungle gyms; millions of coloring books; and two beautiful station wagons by which more than 30 children were brought to and from school. Heartwarming it was to the clubwomen and to the community, an outstanding service. No longer is it a County Project. The good work is carried on by many clubs. One part of this program was a hot soup lunch with young clubwomen to help at the lunch hour.

In this same county, concentrated attention is now directed toward helping the blind of the area with money emphasis on the School for Blind Children. At one time this had been a Junior Project so the Juniors are pleased that it has been so completely accepted. Braille writers and all kinds of help are being provided.

In all areas, I believe, civic groups take care of Tuberculosis seals at Christmas time and seals for Crippled Children at Easter time. It is also true that these groups assist the voluntary agencies in their work with heart, cerebral palsy, multiple sclerosis, epilepsy, etc., in their health programs and in their fund drives.

Civic groups have always taken the lead in the fight against polio, and, now that the Salk vaccine has been discovered, that same effort is being directed toward the Salk Institute for Research in San Diego, California.

Many members of women's civic groups have taken courses in home nursing as well as the Survival Course given by the Red Cross. These women stand ready for emergencies in their homes or in their communities.

In the Talk-a-Thons that have become a popular way to collect money for health causes, the telephone booths are always manned by volunteers from clubs or other civic groups.

Cancer is the dread disease for which research is ever seeking a cure. Progress has been made, not fast enough to be sure, but educational material, urging examination that will lead to early detection, is distributed annually by volunteer workers. At the same time money for further research is collected. Cancer dressings are made by civic groups and drivers for cancer patients are provided. Clubwomen have spearheaded, too, the drive to teach women to have the wonderful test discovered by the late Dr. Papernicolleau, annually. If this can be accomplished, we are told, the present 14,000 annual death from uterine cancer will be completely eliminated.

The Arthritis and Rheumatism Foundation, this month is being highlighted by the Federation of Women's Clubs. All clubs are asked to hold a breakfast the 6th of March, the proceeds of which will go to combat this crippling disease that attacks 3 times as many women as men.

Community Health Councils and surveys for each town for immediate needs are urged by the Federation. Clubwomen and other civic groups are urged to join Medic Alert and to persuade their friends to do the same.

Clubs also include work in the field of mental health. The Junior clubwomen of the state for several years had mental health as their state project. Many dollars went into the project plus many hours of hard work. This is a secret which I will share with you -- at the Federation Convention in June both Junior and Senior Clubwomen are to be given special recognition for their work in the field of mental health.

In every school there are mentally disturbed children. It is suggested that clubwomen of an area conduct a survey in cooperation with the school physician to see where and how help may be given. Mental health is fast becoming the nation's number 1 health problem and can no longer be ignored. Clubwomen and all civic groups can and should be leaders in developing community acceptance of the fact that mental illness is not a stigma but just another type of ill health. Women should be included on mental health boards and agencies working in this field. Community based programs to provide psychiatric care, medication, vocational counselling, job placement, and temporary living facilities have proved successful.

As consumers, women of civic groups are alerting themselves to the pros and cons of the use of chemical additives in food. Many are good; in our modern world we could not get along without them. There are others of which we should beware until they have been thoroughly tested by the Food and Drug Administration. By the way, do you know that much credit for the passage of the Food and Drug Act of 1906 is given to the Federation of Women's Clubs? Many free materials are available from the U.S. Department of Health, Education, and Welfare. After groups have properly informed themselves, they will work for sound protective legislation. These women can always be counted upon to further legislation if they consider it good -- to oppose it if they consider it bad.

Playgrounds, recreational areas, nurseries, youth centers -- many are the provisions, the purpose of which is to foster health, to keep people well. They are favorite projects of civic groups. Our clubs, following the guidance of the Conservation Department, lends full support to Project 70 and, by resolution adopted by the last Annual Convention, pledged to support a national park for Pennsylvania.

In the various areas of safety, clubs publish thousands of articles, and conduct many, many public safety programs. There are all kinds of safety weeks -- Bicycle Safety Week, Fire Prevention Week, Teen Safety Week -- each being proclaimed by a state governor or a city mayor. In this field the old saying, "Woman's work is never done," can certainly be applied. Women are interested in all aspects of safety, home safety, traffic safety, lighting safety, and industrial safety. The present campaign slogan the Federation of Women's Clubs has suggested for seat belts campaign is "2 million and 2 in '62." In the last administration, it was "1 million and 1 in '61." This goal was surpassed. The Outdoor Protective Lighting Program aims to promote safety and to lessen crime. This Lighting Contest has resulted in the publication of two articles, with pictures, in the State Highway Lighting Magazine and a sizeable amount of press coverage.

Health Fairs have been a project for women's clubs in 7 states. Pennsylvania was not one of them. It may be in the future.

Water, so vital to the welfare of people, is another concern of clubwomen. Some clubs have worked diligently for the fluoridation of drinking water. For 25 years the Federation of Women's Clubs, with other civic groups, has worked for clean water for Pennsylvania. These groups see the polluted stream from different points of view. Some act for clean streams merely because the cause is right, others see the threat of beauty destroyed and still others recognize that water pollution is a threat to health and economy. For whatever reason people acted in the past, no group may become complacent, feeling that the job is done. To keep ahead of the wave of pollution, we cannot step aside or ground will be lost. The fight against water pollution must be a combined and never ceasing effort.

Pennsylvania clubwomen worked long and diligently to find a project upon which to focus attention in this administration. High government officials, university professors, people in many walks of life were consulted as to what they thought was the outstanding problem upon which attention should be focused. Many were the suggestions. In one city where I was talking a note was slipped into my hand after the meeting was over. It read, "Not safety. Not juvenile delinquincy. Not water pollution -- but APATHY." She is right. Apathy is our greatest problem in Pennsylvania and throughout the land. Elections are not lost because people have voted the wrong way;

they are lost because people have not bothered to vote! **APATHY** must be the foe against which we would direct our forces. So we called it: **PROJECT ALERT** -- Alert! Educate! Legislate! To be aware, to learn, to educate ourselves by all the wonderful means of communication at our command, to educate the public, and lastly, to be able to take a stand for or against pending legislation and, if necessary, to initiate legislation.

Toward what would this be focused? After much discussion, this was the result: "To protect the public from the dangers of harmful drugs, chemical poisons, water pollution, air pollution, and other threats to health." The wording is important. It does not say, "To protect from drugs," it says from "harmful drugs." Drugs are useful, we need them, but even useful drugs may be used in harmful ways and there are truly harmful drugs. I've no doubt the thalidomide scare was, at least, partly responsible for this section. We say to protect from chemical poisons, not from chemicals. Chemicals, when used in good and wise ways, are friends to mankind. When used carelessly, as are many insecticides and pesticides, they become real foes. Our opposition is to chemicals used so that they become poisons. I am sure that Rachel Carson's book, Silent Spring, was the springboard from which this part of the project was reached. One may not agree with all of it but it will make people think. Water pollution we have already talked about. Air pollution is another threat to health to which civic groups are not strangers. All clubs will work to a greater or lesser degree on this project. I'm sure clubs in any area would be glad to be called upon to "lend a hand" in service in any phase of this work.

I'd like to quote a bit of verse with which one chairman gave her report last spring. It isn't poetry, but it tells a story.

> "From aloft we view our work of the past two years.
> Was it your club that earned the rest of our cheers
> By aiding Research for the yet unborn?
> A worthy project, not to be scorned,
> Baby clinics, Red Cross Classes for young mothers --
> So many things. Let me name a few others.
> Did you give physical aids for children crippled from birth?
> Or means to go to summer camp for health or for mirth?
> Did you have nursery schools for the mentally retarded?
> To see the stars in their eyes, you'd be well rewarded.
> Give scholarships for nurses' training or college?
> There is no better aim than to foster knowledge.
> Did your club volunteer in the 41 institutions -
> And hospitals for service? Both good resolutions!
> Or start Golden Age groups, bring cheer to the aged?
> Did you aid local firemen when fires raged?
> How many enhanced your community by planting trees?

Brought safety by street lighting, enlarged libraries?
Did you shake down some stardust with Pepsi caps
To help the deaf and blind fill in some of their gaps?
And aid Research for Cystic Fibrosis -- take the Uterine Cancer Test?
We want all to know that you've done your best.
Hats off to the past, but coats off to the future, we add --
Once again we are back at the launching pad,
Old mistakes to correct, still much to do,
Plans to try out, areas to reach that are new.
We'll remember, as we set our sights for the long look ahead,
It's teamwork that counts, nothing can stand in its stead."

Good health is now regarded as an "inalienable right." To strengthen ourselves as individuals and as a people, we must all work together to maintain the highest possible standards of health for our families, our communities, our state and our nation.

CITIZENS FOR ECONOMIC PROGRESS - Clifton E. Rodgers

Having working with sanitarians and benefiting from information produced by their environmental suveys, I fully appreciate the importance and usefulness of their services. Since a large portion of our community development work is concerned with the maintenance of a healthy environment, we have observed the skillful and thorough manner in which your specialists approach the subject.

As some of you know, we have assisted in setting up community and county surveys. Tragically, though, there are communities where both health people and the planner have failed to activate the program, even though the need is desperate and the obvious correction work that would follow would be their salvation. The services you offer in environmental health surveys are so fundamental, supporting the background information for the comprehensive planning program, that closer coordination in staging and reporting would produce effective results.

As a community planner, I welcome health people as an ally to stimulate and guide local action to improve and maintain a favorable community environment.

Pennsylvania, like the nation, is experiencing a great upsurge in urban planning. This is necessary, for approximately 75% of our total population is living in urban areas and the trend is accelerating. Coupled with this is the fact that our communities and facilities are old, some worn out, and some 'blighted.. This blight is a characteristic in our growing and prosperous urban areas, as well as those suffering a decline in population and employment.

My experience with urban planning shows that we must concern ourselves with other adverse influences if we are to achieve orderly growth and development. These include: the fantastic blight created by the strip mines, the culm piles, and the unused industrial properties and almost ghost villages in the coal areas; the tragic erosion of fertile or forest land, rendering acres on acres of essential water shed areas useless; the pollution of streams and rivers with sewage and industrial waste; the outlaw strip commercial developments that blight the highways that have been constructed at tremendous public expense.

Considerable progress is being made to correct these grievous errors of the past. The commonwealth of Pennsylvania is in the process of mobilizing an all-out effort to maintain the many sound urban and rural areas, as well as to renew and energize the depressed areas. Much good has been and is still being done through inter-departmental cooperation at the state level. This effort points to community planning and renewal, industrial development, conservation of forests, state parks, highway development, clean streams, flood control, soil conservation, public schools, health, recreation, and various welfare programs.

Through the help of the Bureau of Community Development and the State Planning Board, there are now 38 county, 27 regional,51, city, 364 borough, and 360 township planning commissions at the local level. There is a desperate shortage of trained and experienced planners to work on all the programs and projects that are being conceived by local and state agencies. The help of health groups will be greatly appreciated, since much of the planning activity is concerned with the maintenance of community environment.

MOBILIZING TO DO THE JOB

Population growth, increasing densities, and relentless expansion are inevitable here if we want to grow and improve our economy. Our urban concentrations are bound to further penetrate and infiltrate our remaining agricultural and forest areas. This is a normal and, in many ways, desirable process. But in the name of all reason, we must see that this process is wisely guided and controlled. The efforts as physical planners in relation to this expansion would seem to be threefold.

First, we must seek to preserve intact such significant natural areas and features as are necessary to protect our water sheds and maintain our water table, to conserve our forests and mineral reserves, to check erosion, to stabilize our climate, to provide sufficient land reserves for recreation and wild life sanctuaries, and to preserve areas of notable landscape interest or value. Such areas might be purchased and administered by federal, state, or local park or conservancy commissions. Project 70, now before the Legislature, is such a program, and would be of invaluable assistance.

Second, we must insure logical development of the existing landscape. Such thinking points to the state planning program. This board is empowered to explore and determine on a broad scale the best conceivable use of all lands and natural resources, to conserve, through purchase if necessary, those areas that should be preserved, to encourage through zoning legislation and federal or state aid, the best and proper development of these and all remaining areas for the long range good of the state. But, of critical importance is the need to constantly re-assess and keep flexible these programs and master plans; to do this work, we must engage the very best of the trained physical planners, geographers, geologists, biologists, sociologists, landscape architects, and other related professions.

Third, we must consciously and astutely continue to organize and energize urban planning programs and, in this respect, the department of commerce with its bureau of community development is performing a gigantic task with too few people. With about 75% of the state's population in urban areas, and the trend accelerating, it is high time now that we plan on a maturing basis. We must do it now -- plan positively!

AN ORGANIZATION CONCEPT

STATE LEVEL

With the continued assistance of the state planning board and inter-departmental cooperation, I place great confidence in the broad scale planning and development operation that can take place. The organization and know-how is there, let's mobilize it!

REGIONS AND COUNTIES

The regions and counties are more loosely organized geographical areas, generally consisting of a city with several satellite communities separated by agricultural or forest lands, but generally representing an economic area of interest to the citizens.

To simplify the complex problems of supply and demand, we might propose that each region, whether it consists of one county or two, or several, should be analyzed, planned, and zoned for its highest and best use in relation to population potential, inherent resources, and economy, and through this process establish an effective framework for the growth and development of communities and neighborhoods from within. The regional or county plan must integrate the state-wide program to conserve open space for agriculture, recreation, forest and conservancy districts. All such areas and facilities should be connected with a network of arterial expressways to provide for the circulation of traffic and goods.

THE COMMUNITY

By the pooling of resources and technical know-how from a regional or county commission, each local unit of government experiencing urbanization must be organized, whether a city, borough, or township. Depending on its size, the community may consist of one or several neighborhoods. Ideally, if we can bring together a grouping of at least 10,000 families, they can generally support a high school, and other essential community facilities.

THE NEIGHBORHOOD

Attention is directed to the soundness of the neighborhood concept for family living. An ideal neighborhood consists of about 1200 families which can support an elementary school, playground, and daily shopping facilities for the housewife. These neighborhoods should be laid out so that heavy traffic flows around them and the children can walk to and from school.

THE CIRCULATION NETWORK

The neighborhoods can generally be planned to border on parks and open spaces, with free flowing parkways so that a group of neighborhoods may fit together to form the community. These open spaces may contain sewer and water lines, drainage ways, and other utility services, as well as trees and vegetation. This network of parks and highways may flow into the rural areas with full respect to hills, ravines, streams, and rivers. In urban areas, this could be called "The Green Belt."

CENTRAL BUSINESS DISTRICT

As we know, a city may consist of several communities which together form a densely populated urban center of economic, social, and political activity. The city, large or small, is the center of our urban culture and vitality -- and from it generally comes the force for progress of the region in which it is located. In addition to all of the environmental features of the neighborhood and community, the city has a compact core that functions as the nerve center of the city and region. Here we find government and business centers, department stores,theaters, offices, museums, cathedrals, and even colleges or universities. Each central business district is a special problem area and, in pennsylvania, much renewal work is under way, or being planned, to recreate these centers for the job they must do in their respective regions. To those interested in the environment, the effort to bring parks and parklets back into the downtown deserves support. They serve as a tranquilizer in the sea of concrete and blacktop. But the job of fitting the CBD for the future entails drastic surgical measures of redevelopment, plus new investments by public and private agencies.

INDUSTRIAL DISTRICTS

Today the concept of industrial districts has changed. We now have industrial parks, attractively laid out in landscaped surroundings -- buildings of fine architecture with adequate controls on noise, dusts and wastes. Progressive businessmen have found this type of development to be good business, good employee relations, good community relations, and good advertising.

The multi-story loft buildings and dark smokestacks in crowded urban conditions are a thing of the past. But Pennsylvania, being one of the Nation's older manufacturing states, has a bigger job than most states to replace obsolete plants and the blighted environment that surrounds them.

SUBURBAN SHOPPING CENTERS

With growth of population, more and more suburban shopping centers are bound to come. The fear here is not the investments being made in these new centers, for this is desirable. With growth the pie gets bigger, but it is sliced in different ways. The concern then is two-fold: (1) the need for proper location planning of the new centers so that our highways are able to carry the through traffic and local traffic; and (2) the redefinition and implementation of programs to encourage new investments in the central business districts which now represent such a percentage of the urban property values.

RURAL AREAS

Here is where the most good can be done through the guidance of urban growth, along with forceful and integrated measures at the state and county levels. For instance:

1. Strip mining is essential to our economy, but planning the re-use of the land before opening the earth bowels, could mean that a single grading operation could create recreation areas, flood control projects, farms, or other appropriate re-uses, even industrial parks.

2. Flood control reservoirs very often can become sources of water supply and electric power, or serve as lakes for recreation areas.

3. Fertile farmland and precious water shed areas can be preserved while marginal land can be used for urban developments.

4. Flood plains and steep slopes can be used for open land projects while urban developments can be encouraged on suitable land.

5. An urban economy, integrated with a rural economy, generally makes the two more stable and diversified in healthful surroundings.

Can we expand our economy with the help of integrated rural and urban planning? Yes!

Fitting our communities for the future requires replacement of worn-out facilities in poorly laid out and congested areas. Our exploding population requires efficient and health areas for housing, commerce, and industry as the trend of urbanization continues.

Worn-out substandard urban areas are a threat to the entire social and economic structure of the nation. We must integrate our rural areas with our urban areas and conserve open space. Here's an opportunity of fulfill national and local needs. The program favors a partnership or private enterprise and government.

As a timely and helpful prop to the Nation's economy, an energized urban renewal program could snowball the high level of prosperity for the past decade into a roaring boom for the 1960's and beyond. Popular to people's imagination and investiments, the program centers activity in the urban areas where a majority of the people will benefit. Properly conceived, the program could integrate national defense plans with rebuilding of attractive urban areas, while conserving natural resources in rural and forested areas. Don't let this worthwile program stumble along!

We have the necessary resources to do this job, but we need civic leadership! Let's give it dynamic leadership and build attractive communities with a sound economy!

We need the leadership of our governor, the legislators, and all state and local officials.

We need the leadership of businessmen from big corporations and small businesses.

We need the leadership of private citizens and their cultural and civic organizations.